ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE

NINETY-SEVENTH CONGRESS
SECOND SESSION

PART 1 (Pages 1–644)

DEPARTMENT OF THE ARMY
Corps of Engineers—Civil
DEPARTMENT OF THE INTERIOR
FEDERAL ENERGY REGULATORY COMMISSION
NUCLEAR REGULATORY COMMISSION
TENNESSEE VALLEY AUTHORITY

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

FRIDAY, MARCH 12, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS
Washington, D.C.

The subcommittee met at 10:05 a.m. in room 1114, Everett McKinley Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Stennis, Byrd, Burdick, and Sasser.

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

STATEMENT OF WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS

INTRODUCTION OF WITNESSES

Chairman HATFIELD. The hearing will come to order.

The purpose of this meeting today is to review the fiscal year 1983 budget requests for the programs and activities of the Army Corps of Engineers.

As our first witness, we welcome Mr. William R. Gianelli, Assistant Secretary of the Army for Civil Works. This is Mr. Gianelli's first appearance before the committee and we look forward to his testimony. It is certainly not the first contact we have had—we date back about 20 years.

It is a great pleasure to welcome you here today, knowing from our past experience and relationships. I really anticipate renewing those contacts.

In addition, we are pleased to have with us Lt. Gen. Joseph K. Bratton, Chief of Engineers; Brig. Gen. Forrest T. Gay III, Deputy Director of Civil Works who is pinch-hitting today for General Heiberg; and Mr. Bory Steinberg, Chief of the Programs Division.

These gentlemen are accompanied by officers and professional staff members of the Corps.

Mr. Gianelli, your full statement will be included in the record. Please proceed with your testimony.

Mr. GIANELLI. I welcome and appreciate this opportunity to discuss the Army's civil works program and the fiscal 1983 budget recommendations. As you indicated, Mr. Chairman, the Chief of Engineers, Lt. Gen. Joseph K. Bratton, is here with us; and Deputy Director of Civil Works Brig. Gen. Forrest T. Gay III; and the Chief of Programs Division, Bory Steinberg. After we are finished with our presentation, we will be available to assist in responding to any questions you might have.

With your permission, Mr. Chairman, I would like to proceed by asking that my statement be placed in the record of these hearings. I would like to highlight portions of my written statement, as would the Chief of Engineers, following which we would be pleased to answer the committee's questions.

BASIS OF STATEMENT

Underlying this statement is the reality that pressure on the budget will preclude the Federal Government from being able to finance all—or even a major portion—of the water projects which this Nation needs. New approaches to financing the Corps program are needed and, I hope, Mr. Chairman, that we will be able to work together to bring these about.

Today, I would like to briefly discuss the following topics:

First, financing and cost-sharing proposals for fiscal year 1983 construction new starts; second, the fiscal year 1983 budget summary; third, a two-phase process and cost sharing for future project studies; fourth, working group and regulatory program initiatives; and last, some activities of the working group of the Assistant Secretary and some of our regulatory program initiatives.

FINANCING AND COST-SHARING PROPOSALS

First, with respect to financing and cost-sharing proposals for fiscal year 1983 construction new starts, Federal public works programs, including the civil works program of the Army Corps of Engineers, are at a crossroads. The hard facts are that there have been limited construction new starts in recent years and no major legislation authorizing new projects has passed Congress since the middle of the last decade. It is wishful thinking, I believe, to count on the historical formulas and processes to reverse this dismal trend. The country continues to need productive water projects and I want the Corps to build them.

Toward that end, the Department of the Army is fashioning new financing and cost-sharing proposals which, with this committee's support and with the Congress support, will enable us to move out in fiscal 1983 with a modest construction new starts program for the Army Corps of Engineers. In the past several weeks, we have been discussing with non-Federal interests and project sponsors a potential new starts program.

A list and description of the potential construction new starts, their total costs, and their status as of March 10, 1982, are contained in my written statement.

The potential projects have been reviewed and approved as good projects by the Chief of Engineers, as well as by my own office. Recently, we also have had discussions with representatives of Norfolk Harbor, Va., which is not yet authorized for construction. The President's budget, as it now stands, does not identify any specific project that would go to construction in fiscal 1983 and, of course, the President would have to approve any new starts which are proposed. We are offering non-Federal sponsors of potential construction projects the opportunity to provide upfront financing and cost sharing in accord with objectives which the Army has adopted for the fiscal year 1983 budget.

It is too early to assess results overall, and while we have no signed contract or formal memorandum of understanding, I am certainly encouraged so far. We will keep you advised as things develop during the coming weeks.

BUDGET SUMMARIES

The net fiscal year 1983 budget request for the civil works program totals $2.264 billion. This net request takes into account offsetting receipts estimated at $547 million, of which $519 million would be realized under navigation and recreation user fee legislation supported by the administration. Appropriations from fuel tax collections in 1981 and 1982 amounting to $67 million are included in the $519 million estimate. The gross request thus amounts to $2.744 billion. The bulk of the $2.744 billion is in three appropriation accounts: "Construction, general," "Mississippi River and tributaries," and "Operation and maintenance."

CONSTRUCTION, GENERAL

The $1.209 billion requested for "Construction, general" is to continue construction and related activity of 159 water projects having navigation, flood control, water supply, hydroelectric, and other attendant benefits. This includes 137 regular construction, 15 major rehabilitation projects, 2 dam safety assurance projects, 3 correction of deficiency projects, and 2 beach erosion control reimbursement projects.

FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

Next, with respect to "Flood control, Mississippi River and tributaries," the $282 million requested in fiscal year 1983 is the largest amount ever budgeted for the flood control program for the lower Mississippi Valley from Cape Girardeau, Mo., to the Gulf of Mexico and its contiguous basins. Approximately 10 studies of potential development, 13 construction features, and operation and maintenance on numerous water control structures including navigation locks, flood control dams, and flood control structures are included in this request.

OPERATION AND MAINTENANCE, GENERAL

And third, the $1.011 billion is requested for "Operation and maintenance" of approximately 500 channel and harbor, lock and dam, flood control reservoir, local protection and multiple-purpose power projects; for the processing of applications for activities and structures affecting navigable waters; and for the development of national emergency preparedness plans pursuant to Executive Order 11490. This amount is adequate to maintain and operate existing projects with the following exceptions: One, services to the public at some of the Corps' high-cost recreation areas will be curtailed; and two, low-volume/high-cost navigation operation and maintenance is to be reduced or deleted.

NAVIGATION O. & M. REDUCTION

Elimination of, or reductions in, navigation O. & M. projects in the fiscal year 1983 budget in the amount of $150 million is based on criteria developed to identify those projects with the lowest national priority. The criteria used were based on harbor depths, average cost of harbor maintenance per ton of seagoing commerce, and usage of inland waterways. Consistent with the President's budget proposal, the Corps of Engineers will have to restrict its maintenance to the highest priority options if Congress does not enact legislation for waterway user charges. The legislation would provide for recovery of costs assigned to commercial navigation for deep-water ports and inland navigation systems.

COST SHARING FOR FUTURE STUDIES

I have long been concerned over several aspects of the Corps planning process. These concerns seem to be shared by Members of Congress and others interested in water resource development. Specifically, I am concerned with the length of time it takes to complete a typical feasibility study, the high cost of individual studies, and the high proportion of unfavorable studies upon which substantial resources have been expended. I, therefore, feel it is imperative that we take steps to allow the Corps to concentrate its planning resources—manpower and budgetary—on the more important studies which have the best chance of implementation.

I am proposing that, beginning in fiscal year 1983, all new studies pertaining to specific problem areas be undertaken in two phases. The first phase will be a reconnaissance phase financed 100 percent with Federal funds and normally completed within a year. The second phase will be a feasibility study to be cost shared with local project sponsors. I would view the reconnaissance study to be fully funded when it receives its initial appropriation. It would, first of all, define the problem and its potential solutions; second, determine whether or not the study should proceed further, based on a preliminary appraisal of costs, benefits, and environmental impacts of alternative solutions; third, estimate the costs of the second phase feasibility study; and last, identify local sponsors and indicate the sponsors' willingness to participate in the feasibility study on a cost-sharing basis.

I believe that this procedure will not only speed up the planning process, but will increase the proportion of studies which leads to successful solutions of problems.

Let me move on to a couple of other items which I think will be of interest to your committee, Mr. Chairman, including an ad hoc Assistant Secretaries' working group on water resources and regulatory program initiatives.

REVISED PRINCIPLES AND STANDARDS

The purpose of the working group is to analyze issues and policies related to Federal water policy. This group produced the new water project planning guidelines to replace the principles and standards of the Water Resources Council. The Council plans to publish the revised principles and guidelines in the Federal Register and provide a 60-day comment period before adopting them as final guidelines. We believe that the revised guidelines will simplify and streamline the planning process.

CORPS REGULATORY PROGRAM

Regarding the Corps' regulatory program, the jurisdiction in recent years had expanded to the point where it covered virtually all watered areas in the United States. We have identified issues for reform with the objective of increasing State and local responsibility and reducing the time and effort for both the Corps and the applicants in obtaining permits.

Mr. Chairman, one of the problems about which I have heard a great deal since I have come to Washington concerns the Corps' section 404 program. And I really hope, with the help of the Congress and some of the things we can do administratively, that we can really streamline that program so that the permit process can be expedited more rapidly than it has in the past.

PREPARED STATEMENT

This completes my statement, Mr. Chairman. I would like to defer to General Bratton, if I might.

[The statement follows:]

STATEMENT OF WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

I. INTRODUCTION

I welcome and appreciate this opportunity to discuss the Army's Civil Works Program and FY 1983 Budget recommendations. The recommendations, I know, will receive your careful review; I believe that they will merit your support as well. The Chief of Engineers, Joseph K. Bratton, the Deputy Director of Civil Works, Brigadier General Forest T. Gay, III, and the Chief of Programs, Bory Steinberg, are with me and will assist in presenting testimony.

With your permission, Mr. Chairman, I would like to proceed by asking that my statement and that of General Bratton be placed in the record of these hearings. I would like to highlight portions of my written statement, as would the Chief of Engineers, following which we would answer the Committee's questions.

Underlying this statement is the reality that pressure on the Budget will preclude the Federal Government from being able to finance all -- or even a major portion -- of the water projects which this Nation needs. New approaches to financing the Corps program are needed, and I hope, Mr. Chairman, that we will be able to work together to bring these about.

My statement addresses these topics:

- Financing and cost sharing proposals for FY 1983 construction new starts;
- Trends in the Civil Works budget;
- FY 1983 Budget summary;
- A two-phase process and cost sharing for future project studies;
- Working group, regulatory, and 8(a) program initiatives; and
- Manpower and superfund.

II. FINANCING AND COST SHARING PROPOSALS FOR FY 1983 CONSTRUCTION NEW STARTS

Federal public works programs, including the Civil Works Program of the Army Corps of Engineers, are at a crossroads. The hard facts are that there have been limited construction new starts in recent years, and no major legislation authorizing new projects has passed Congress since the middle of the last decade. It is wishful thinking, I believe, to count on the historical formulas and processes to reverse this dismal trend. The country continues to need productive water projects, and I want the Corps to build them.

Toward that end, the Department of the Army is fashioning new financing and cost sharing proposals which, with this Committee's support and with the Congress' support, will enable us to move out in FY 1983 with a modest construction new starts program for the Army Corps of Engineers. In the past several weeks, we have been discussing with non-Federal interests and project sponsors a potential new starts program.

A list and description of the potential construction new starts, their total costs, and their status as of March 10, 1982 follow:

STATUS OF 1983 NEW STARTS
As of March 10, 1982
$ Million

Project	Total Cost[1]	Proposed Financing Federal	Proposed Financing Non-Federal	Federal Funds Required In 1983	Status	Description of Project
Navigation Projects						
Jonesport Harbor, ME	$ 9.7	$ 2.4	$ 7.3	$ 0.2	Under consideration by State.	Breakwater & channel deepening-commercial fishing.
Baltimore Harbor, MD	420.0	105.0	315.0	22.0	Offer under discussion with State.	Deepen channel, 54 miles
Freeport Harbor, TX	98.8	24.7	74.1	3.5	Locals working on financing 1st Phase project.	Deepen channel depth & widen, new jetty.
Kake Harbor, AK	15.7	3.9	11.8	1.5	State wants to defer until 1985.	New breakwaters. Commercial fishing.
Ponce Harbor, PR	9.4	2.3	7.1	0.7	Unable to accept now; can repay loan.	Deepen channel.
Hyrdopower Projects						
Strube Lake, OR	106.0	0	106.0	0	Local agency interested, under discussion.	Dam & power plant, total 40,000 KW.
Bonneville Fishway, OR	27.9	0	27.9	0	No sponsor identified as yet; under study.	Small hydro units on existing fishway-11,000 KW.
Bradley Lake, AK[2]	477.9	0	477.9	0	Accepted; draft letter of intent under review.	Dam, Tunnel, Power Plant, 135,000 KW.
Flood Control Projects						
Dansville, NY	1.0	0.65	0.35	0.3	Rejected.	Levees & channel improvement.
Davenport, IA	57.2	36.3	20.9	0.8	City mgr. will recommend acceptance to Council.	Levees & channel improvement.
Merced, CA	130.0	84.5	45.5	5.5	Accepted as proposed.	2 reservoirs, 33 miles levees & channel improvements.
Multi-Purpose Projects						
Randleman Lake, NC	159.0	68.7	90.3	3.4	Unable to accept now, but still working on.[3]	108,000 A.F. Reservoir - 48% recreation, 42% M&I, 10% flood control
Totals	$1,512.6	$328.45	$1,184.15	$37.4		
Possible Additional Projects						
Kahoma, HI, Flood Control	$ 20.0	$ 13.0	$ 7.0	$ 3.0	Sponsor interested, under discussion.	Debris basin, 5400' concrete channel.
Ellicott Cr., NY, Flood Control	28.2	18.2	10.0	0.2	Sponsor interested, under discussion.	2-mile channel improvement, 2-mile new channel.
Virginia Beach, VA, Flood Control	5.4	3.5	1.9	1.5	Sponsor interested, under discussion.	Improve existing channel add 2.6 miles new channel.
Norfolk Harbor, VA, Navig. (Phase 1 only)	45.0	0	45.0	0	Sponsor seeking a Phase 1 project now, at 100% local expense.[4]	Deepen outbound channel to 50'. Federal project not authorized
Totals	$ 98.6	$ 34.7	$ 63.9	$ 4.7		

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[1] 1981 prices, inflated through construction period.

[2] Understand draft contract provides for 100% local financing, O&M by Corps as Federal project, marketing of power, eventual ownership of project by State. Parties are State, Corps, and Federal Alaska Power Marketing Administration.

[3] State does not want to defer recreation.

[4] Material from inner harbor goes to Craney Island Disposal Area; that from ocean channel would go to Dam Neck Interim Disposal Area; no problem using Dam Neck for Phase I

The potential projects have been reviewed and approved as good projects by the Chief of Engineers, as well as by my own office. Recently, we also have had discussions with representatives of the Norfolk Harbor, Virginia Project, which is not yet authorized for construction. The President's Budget, as it now stands, does not identify any specific project that would go to construction in FY 1983, and, of course, the President would have to approve any new starts which are proposed. We are offering non-Federal sponsors of potential construction projects the opportunity to provide upfront financing and cost sharing in accord with objectives which the Army has adopted for the FY 1983 Budget. The non-Federal financing and cost sharing objectives which we are proposing for 1983 are, respectively, as follows: deep draft commercial navigation - 75% and 100%; hydropower - 100% and 100%; flood damage reduction - 35% and 35%; municipal and industrial water supply - 100% and 100%; and separable recreation - 50% and 50%.

These objectives represent our best effort at this time to get something started. We are pointing out to non-Federal interests that these financing and cost sharing objectives are not in accord with traditional requirements for cost sharing and that any project we recommend will have to be approved by OMB, and by Congress, and that they should consider all options open to them, including that of not participating. Where letters of intent are forthcoming, we will go to OMB seeking approval of a budget amendment for submission to Congress.

It is too early to assess results overall, and while we have no signed contract or formal memorandum of understanding, I am certainly encouraged so far. We will keep you advised as things develop during the coming weeks.

III. TRENDS IN THE CIVIL WORKS BUDGET

The Civil Works budget of the Army Corps of Engineers is about at the same level in FY 1983 as it was five years ago in FY 1978. In FY 1978, the total appropriations amounted to $2.784 billion. This compares with the gross budget request in FY 1983 of $2.744 billion. However, within the total appropriation, the funds provided for major appropriation accounts have changed. For example, Construction, General funding has gone from $1.538 billion in FY 1978 to $1.209 billion in the FY 1983 budget, which reflects the limited commitment to construction new starts in recent years. Over the same five-year period, funding for Operation and Maintenance, General has increased from $769 million to the $1.011 billion included in the President's budget. Comparable figures for the Flood Control, Mississippi River and Tributaries account show an increase from the $253 million appropriated in FY 1978 to the $282 million budget request for FY 1983.

IV. FY 1983 BUDGET SUMMARY

The *net* FY 1983 budget request for the Civil Works Program totals $2.264 billion. This net request takes into account offsetting receipts estimated at $547 million, of which $519 million would be realized under navigation and recreation user fee legislation supported by the Administration; appropriations from fuel tax collections in 1981 and 1982 amounting to $67 million are included in the $519 million estimate. The gross request thus amounts to $2.744 billion. The bulk of the $2.744 billion is in three appropriation accounts: Construction, General; MR&T; and O&M.

Construction, General

The $1.209 billion requested is to continue construction and related activity of 159 water projects having navigation, flood control, water supply, hydroelectric, and other attendant benefits. This includes 137 regular construction, 15 major rehabilitation projects, 2 dam safety assurance projects, 3 correction of deficiency projects, and 2 beach erosion control reimbursement projects.

Flood Control, Mississippi River and Tributaries

The $282 million requested in FY 1983 is the largest amount ever budgeted for the flood control program for the Lower Mississippi Valley from Cape Giradeau, Missouri, to the Gulf of Mexico and its contiguous basins. Approximately ten studies of potential development, 13 construction features and operation and maintenance on numerous water control structures including navigation locks, flood control dams, and flood control structures are included in this request.

Operation and Maintenance, General

The $1.011 billion requested provides for the operation and maintenance of approximately 500 channel and harbor, lock and dam, flood control reservoir, local protection and multiple-purpose power projects; for the processing of applications for activities and structures affecting navigable waters; and for the development of national emergency preparedness plans pursuant to Executive Order 11490. This amount is adequate to maintain and operate existing projects with the following exceptions: (1) services to the public at some of the Corps' high cost recreation areas will be curtailed and (2) low volume/high cost navigation operation and maintenance is to be reduced or deleted.

Elimination of, or reductions in, navigation O&M projects in the FY 1983 budget in the amount of $150 million is based on criteria developed to identify those projects with the lowest national priority. The criteria used were based on harbor depths, average cost of harbor maintenance per ton of seagoing commerce, and usage of inland waterways. Consistent with the President's Budget proposal, the Corps of Engineers will have to restrict its maintenance to the highest priority options if Congress does not enact legislation for waterway user charges. The legislation would provide for recovery of costs assigned to commercial navigation for deep water ports and inland navigation systems.

Absent an increase in the appropriation request which would result if adequate reimbursement is provided through user fees, there would also be the opportunity for local action on specific projects.

It is recognized that the impact of navigation O&M elimination or reduction may be more severe in some instances than in others. Changes may be made, although the total reduction of $150 million will be achieved in any revised proposal in the absence of enactment of user fee legislation.

V. A TWO-PHASE PROCESS AND COST SHARING FOR FUTURE PROJECT STUDIES

I have long been concerned over several aspects of the Corps planning process. These concerns seem to be shared by Members of Congress and others interested in water resource development. Specifically, I am concerned with the length of time it takes to complete a typical feasibility study, the high cost of individual studies, and the high proportion of unfavorable studies upon which substantial resources have been expended. I therefore feel it is imperative that we take steps to allow the Corps to concentrate its planning resources (manpower and budgetary) on the more important studies which have the best chance of implementation.

I am proposing that, beginning in FY 1983, all new studies pertaining to specific problem areas be undertaken in two phases. The first phase will be a reconnaissance phase financed 100 percent with Federal funds and normally completed within a year. The second phase will be a feasibility study to be cost shared with local project sponsors. I would view the reconnaissance study to be fully funded when it receives its initial appropriation. It would establish:

- the definition of the problem and its potential solutions;
- a determination of whether or not the study should proceed further, based on a preliminary appraisal of costs, benefits, and environmental impacts of alternative solutions;
- an estimate of the costs of the second phase feasibility study; and
- identification of local sponsor(s) and indication of its (their) willingness to participate in the feasibility study on a cost sharing basis.

I believe that this procedure will not only speed up the planning process, but will increase the proportion of studies which leads to successful solutions of problems.

VI. WORKING GROUP, REGULATORY, AND 8(A) PROGRAM INITIATIVES

Assistant Secretaries' Working Group

One of the first actions of the President's Cabinet Council on Natural Resources and Environment was to form an *ad hoc* Assistant Secretaries' Working Group on Water Resources to analyze issues and policies related to Federal water policy. As the Assistant Secretary of the Army for Civil Works, I was asked to chair the Working Group. The first assignment given to the Working Group was to examine the existing complex and cumbersome Principles, Standards, and Procedures of the U.S. Water Resources Council.

In early September, we distributed to the concerned committees of Congress and to organizations representing the States and interest groups a summary of Major Proposed Policy Positions for Water Project Planning. Based upon the comments we received, the guidelines were revised and were referred to the Water Resources Council for publication pursuant to the Water Resources Planning Act of 1965.

The Water Resources Council, as the agency responsible for establishment of water project planning criteria, will soon publish the proposed Principles and Guidelines in the Federal Register and provide a 60-day public comment period. The WRC will consider the public views expressed during the comment period prior to final preparation of the Principles and Guidelines early this summer.

Another important water resources policy area is that of project cost sharing and financing. It is generally recognized that there must be a substantially increased rate for both non-Federal governmental units and the private sector. There are two reasons for this. First, the Administration is strongly committed to the principle that vendible services from projects should be paid for by their beneficiaries. When beneficiaries pay for the services they receive, we can have a high degree of assurance that we are providing both the right quantity and quality of service. Indeed, we believe that the willingness of beneficiaries to repay the cost of a project in accord with the schedule of benefits gives the Government an assurance of the project's worth that can never be obtained from benefit cost analysis.

Second, substantially increased amounts of financing must come from non-Federal sources simply because the Federal Government cannot now afford to finance a major program of water project construction. I expect that the major future agenda items in the area of water policy for the Administration will be the twin issues of water project financing and cost sharing.

Corps Regulatory Program (Section 404)

Of the amount budgeted for Operation and Maintenance, General, $47 million is to be used to conduct the Corps regulatory program. This program has its foundation primarily in Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act. For the first seventy years, the permit program regulated those activities in the navigable waters which could have an effect on navigation. In the past decade, however, jurisdiction of the program has been expansively defined by the courts, resulting in regulation to the point where any person who wants to place dredged or fill material in virtually any watered area in the United States, including wetlands, prairie potholes, playa lakes, and intermittent streams, must first get a permit from the Corps.

We have identified five major issues for reform: (1) reduction of the time required to obtain permits; (2) better definition of the objectives of the program and a reduction of the jurisdictional extent of the program; (3) reducing the delay in decisionmaking caused by overlapping policies and authorities; (4) giving the States more authority and responsibility; and (5) expanded use of general permits on a regional and nationwide basis.

With these issues firmly in mind, we and the Office of Management and Budget have been working with the Environmental Protection Agency, the Departments of Agriculture, Justice, Commerce, Interior and Transportation, and the Council on Environmental Quality to develop solutions.

Section 8(a) Program

Another area to which we have been devoting attention is the SBA Section 8(a) program for small and disadvantaged businesses. Some features of this program have been criticized, both by the construction industry at large, as well as by many minority firms, for some time. We recently conducted a review of the Corps' implementation of this program, including holding several meetings with senior officials of the Associated General Contractors (AGC) and the National Association of Minority Contractors (NAMC). As a result of this review, we have proposed several improvements to the Corps and to the SBA, concerning program goals, incentives for firms to "graduate," training for firms under contract, reducing delays in time required to award 8(a) contracts, and several other proposals. These proposed improvements can promote the basic purpose of the Section 8(a) program; namely, to improve the capability of small and disadvantaged construction firms to move into the mainstream of the competitive market place.

VII. MANPOWER AND SUPERFUND

In the current year, Corps employment will decrease by about 2,000 fulltime positions. And although the employment ceilings which we have envision a further reduction in FY 1983 of 634 spaces, Corps manpower will be adequate to meet our responsibilities.

The Corps now is studying the most effective and fair way to achieve the FY 1983 reductions without RIFs. As Civil Works manpower goes down, Corps expertise will be preserved in the Army because we will be shifting personnel to the Military Construction programs of the Corps. Furthermore, as I mentioned earlier, I am hopeful of proceeding with some construction new starts in 1983 and, in so doing, provide challenging opportunities for the capable staff of the Corps to solve important water resources problems.

Another way in which the expertise of the Corps will be utilized stems from the recent agreement reached between the Administrator of the Environmental Protection Agency and me, which will enable the Corps of Engineers to provide the EPA with management and technical assistance in executing PL 96-510, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), known as Superfund.

Under this agreement, the Corps will manage design, construction and related tasks for remedial actions which EPA and the Corps agree upon at hazardous substance sites. EPA will provide the funding, and the Corps will use private contractors for all design and construction. Preliminary projections from the EPA indicate the possibility for the Corps to work on the remedial design or construction of about six sites during the remainder of FY 1982. The same projections indicate that we may be conducting design and/or construction activities on about 12 more sites in FY 1983.

I see this program as an excellent opportunity for the Corps, as the Federal engineers, to provide their engineering and management expertise in an appropriate role to support a critical Federal mission assigned by the Congress.

This completes my statement, Mr. Chairman. I will be pleased to attempt to answer your questions.

STATEMENT OF LT. GEN. JOSEPH K. BRATTON, CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS

Chairman HATFIELD. Good morning, General Bratton.

General BRATTON. If I may, I would like to read a short statement which summarizes my longer, more detailed statement.

Chairman HATFIELD. Your full statement will be placed in the record.

General BRATTON. It is a privilege to appear before this committee as the Chief of Engineers. We are now more than 5 months into the fiscal year 1982, and I view our execution of this year's program very favorably. Both our general investigations and construction programs generally are on schedule and in accord with legislative intent.

OPERATION AND MAINTENANCE PROGRAM

The "Operations and maintenance" account is finely drawn; while I expect no adverse impact on our higher priority projects involving commercial navigation, lower use waterways and harbors will receive less maintenance dredging and other operational and maintenance funds than in previous years. On some of these waterways, operations will have to be curtailed.

The objective of having States or local interests take over a larger share of those programs from which they themselves directly benefit and resource constraints, both money and people, are dictating caution in expanding and operating our recreation program, for which visitor-days in 1981 reached a new high of 468 million. We have reviewed all our recreation areas against the general criteria of efficiency of operation and high-quality service to the public, and will be taking actions to close, curtail, consolidate, or transfer a number of areas. We will continue to operate at full service our most popular and efficient areas across the Nation. As the public continues to use our facilities and the use trend continues to climb, we would consider reopening those facilities where increased visitation occurs and if user fees, as proposed in the budget, are enacted.

Our programs on the Mississippi River and tributaries are well on track. We were pleased to note that we received a very favorable award on the first phase of construction for the Old River Auxiliary Control Structure, the most critical structure under construction in the entire civil works program.

FISCAL YEAR 1983 BUDGET REQUEST

The President's gross budget request for fiscal year 1983 is for $2.744 billion, down $180 million, or 6½ percent, from fiscal year 1982, without considering inflation. This reduction, while modest in comparison to reductions in some other Federal programs, will require careful allocation of resources to assure that priority ongoing work is properly funded. There is virtually no room in the budget for new work on the traditional financing arrangements. I do anticipate new construction starts on the basis described by Mr. Gianelli. As he mentioned, his office and my field staff are working with a number of local and State agencies to reach those agreements.

GENERAL INVESTIGATIONS

For the preconstruction planning program, the budget request is for $129 million, down $8 million, or about 6 percent, from last year. Key ongoing work is budgeted at a level compatible with fiscal year 1982. Some of the studies added by the Congress for fiscal year 1982 are not funded in fiscal year 1983. As I indicated, there are no new starts in this budget for preconstruction planning. The administration believes that preconstruction efforts should be directed to projects where implementation appears probable.

CONSTRUCTION, GENERAL

For the construction program, the budget request is for $1.209 billion, down $208 million, or 15 percent, from last year. I identify no significant adverse impact on our ongoing programs except for the deferral of additional recreation facilities which will proceed when appropriate cost sharing can be arranged. In the absence of a continuing process for determining and funding new water resource projects, which efforts are now underway, we can expect a further decline in our construction effort, and we will soon reach the point at which—for the first time—our operation and maintenance costs exceed those [illegible] new construction.

OPERATION AND MAINTENANCE, GENERAL

For the operation and maintenance program, the budget request is for $1.011 billion, up only about $2.5 million from last year. At this level, we will have to significantly reduce some operation and maintenance of some inland waterways and ports. Both navigation services and dredging will be curtailed, with the lower use and higher cost waterways absorbing the impact. It is, of course, the administration's hope that user fee arrangements will be adopted which will permit relief in this area. I certainly second that hope.

FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

For the Mississippi River and tributaries program, the budget request is for $282 million, up some $26 million, or almost 10 percent, from last year. Because $55 million is allocated to the Old River Auxiliary Control Structure, net funds for the balance of the program are more limited and will require some project deferral or curtailment.

FLOOD CONTROL AND COASTAL EMERGENCIES

Expenditures for responses to natural emergencies have varied considerably in recent years. This makes it difficult to project one year how much money will be required. Because of this uncertainty and the current fiscal constraint, the fiscal year 1983 budget does not include any emergency funds. Nevertheless, we are continuously monitoring the potential for emergency situations across the country. This includes the special problems for the rivers around Mount St. Helens. During two recent flood events on the Toutle and Cowlitz Rivers, the protective measures built by the Corps worked well and only minimal damage occurred. While infill has occurred in the Cowlitz River extending from its confluence with the Toutle River downstream to Castle Rock, about a 3-mile reach, the current level of protection is in the 100-year to 500-year range. Based on these findings, we do not expect any major problems to develop in the near future. In the event that a threat to life and property does occur, we would utilize available emergency funds and, if needed, borrow from other appropriation accounts.

PROGRAM TRENDS AND ISSUES

Now, a word on program trends and issues.

I think the Army Corps of Engineers is a great national asset, capable of making major contributions to the public works needs of the Nation, most notably to its water resources programs. I think it is very important to identify and satisfy these needs in a continuous cycle of planning and construction—a process which involves wise investment in the Nation's future and can be a major factor in reindustrialization, in revitalizing the Nation's economy, and in enhancing our productivity.

We should be attentive now to the fact that the continuous cycle to which I refer has been interdicted by events and by policy. Let me explain this statement—preconstruction planning is still producing survey reports, but without agreement on a water policy review apparatus and acceptable methods of financing; authorization bills are not being enacted; and no new physical work is beginning. Clearly, the Corps must concentrate its efforts on projects which are truly needed and affordable and which have strong local support; we are encouraged by the administration's effort to bring new projects on line.

PERSONNEL REDUCTIONS

A perspective which is of some concern to me is the continuing reduction in that part of the Corps work force allocated to the civil works mission. This work force will have been reduced by about 20 percent over the 14-year period ending this September; 2,000 personnel spaces are being lost this year and I expect a further reduction of several hundred in fiscal year 1983. This brings us to the lowest civilian strength of the Corps civil works force since 1945. This is not necessarily bad, provided employment levels are consistent with the approved workload, and is certainly in line with the President's intent to reduce the Federal work force. We are attempting, of course, to protect our basic strengths in design, engineering, and construction, taking as many of the spaces as we can from administrative and support functions, but we are well past the point where such sizable cuts do not diminish professional capability. Fortunately, we have been able to transfer some of the spaces and people to our military programs and we expect to limit involuntary losses of personnel to a very small number.

MOBILIZATION READINESS PLANNING

Fiscal year 1983 is the third year for which funds are being sought for mobilization readiness planning. This important program, which is receiving increased emphasis despite our manpower cuts, should provide staffing levels for mobilization planning specialists required to accelerate the development of national emergency preparedness plans, to initiate training of personnel in newly identified responsibilities during a national emergency, and to more fully participate in DOD and interagency readiness exercises. These actions are all essential to improving the Corps readiness and capability to manage the tremendous engineering and construction support missions which would be required in any mobilization.

In this regard, I am concerned about a continued long-term downward trend in the civil works staffing levels in terms of its adverse effect on our responsibilities to be prepared to respond to natural disasters and national emergencies. I estimate that it would be necessary to assign about 11,000 of our civil work employees to meet the demands of defense construction. We postpone work that we can class in a wartime situation as nonessential or deferrable and, therefore, would plan to make this transfer. From the viewpoint of the Defense Department, one of the great national benefits of our civil works organization is its status as a strategic reserve for mobilization construction. I think we have to firmly protect that capability.

SUMMARY

In summary, I believe this budget request for fiscal year 1983 is a sound one and will give us a good program, particularly if we can get sufficient agreement to achieve O. & M. funding levels to allow us to return to normal levels of O. & M. The budget request will present some very real challenges in managing our operations and maintenance activities. It may not move some planning and construction projects at the pace envisioned earlier. It is, however, an essentially sound, comprehensive program which I can recommend to the committee, particularly in hopes that the Congress reach early agreement with the President on a cost-sharing or user fee formula that allows us to operate selected lower use waterways and ports. My principal concerns lie with the future, as I have indicated, as we mutually strive to chart a national course for necessary and affordable programs within a policy framework acceptable to the administration and Congress and consistent with the wise use of the very valuable and professional organization which I now have the privilege of commanding.

That concludes my statement.

[The statement follows:]

STATEMENT OF LT. GEN. J. K. BRATTON, CHIEF OF ENGINEERS

INTRODUCTION

Mr. Gianelli has presented an overview of our current and proposed program and described the Department of the Army's new cost sharing and financial proposals. These proposals are being put forth to help restore the viability of the new starts components of the Civil Works program, particularly during times of budget constraint. I, in turn, will expand on the status of the Fiscal Year (FY) 1982 program, provide additional information on the FY 1983 budget, discuss the outlook for the Corps near-future workload, and report on the organizational and functional changes required to accommodate further manpower reductions.

FISCAL YEAR 1982 PROGRAM

Status Report

First, let me discuss some of the specifics of our current program that might be of interest to this committee. We are, to the maximum extent possible, complying with the FY 1982 Appropriations bill as we execute the FY 1982 program. We have balanced Committee guidance with the significant savings and slippages included in the various appropriations for FY 1982 so as to effect sound program execution. Four appropriation accounts warrant some mention.

General Investigations Appropriations

The savings and slippage in General Investigations was allocated to minimize adverse effects on ongoing planning activities that are expected to produce outputs that solve water resources problems. This resulted in some reductions to ongoing project studies and programs and the deletion of certain budget activities. The savings and slippage was applied to virtually all programs within this account.

Construction, General Appropriations

The savings and slippage reduction for the construction program was assigned to projects in a manner which avoided funding delays for budgeted work. Twenty-five projects including four major rehabilitation projects will be completed.

Operation And Maintenance, General Appropriation

The FY 1982 appropriation of $1.008 billion for operation and maintenance included savings and slippage of over $100 million. However, it is adequate for continued operation and maintenance of higher priority projects. There will be less maintenance dredging performed on lower-use, lower-priority channels and harbors. Since many of these types of projects primarily serve recreational traffic, impacts on commercial navigation are expected to be minimal. Part of the funding reduction was absorbed by manpower reductions to include phasing out line handling at navigation locks and reductions in the hours of lock operations. On all waterways, the major change in operating policy is that Corps personnel will no longer be handling lines for transiting vessels. Vessel operators will have to approach, enter and depart lock chambers without the assistance of Corps personnel receiving or casting off vessel lines. At some facilities, a phase-in period where the Corps will continue to handle lines may be required to establish locking procedures which will assure that safety is not compromised. After a short period of adjustment to the use of the new procedures, we anticipate normal traffic flow. On some low-use waterways, the hours of operation also will be reduced as a result of the manpower reductions. In the Ohio River Division, for example, some locks on the Allegheny, Monongahela and Kanawha Rivers will have operating schedules reduced during FY 1982. The final schedules for operation of the locks were developed after coordination with users of the waterways.

Given the objective of having the States or local interests take over a larger share of those programs from which they themselves directly benefit and in light of the budgetary and manpower constraints, I have completed a review of the Corps managed areas with the intent of reducing our involvement in the recreation program. In September, Division Engineers were requested to review all recreation areas that might be considered marginally beneficial to operate when comparing operation and maintenance cost with visitor use. Specifically, they were asked to consider cost-per-visitor, area location and accessibility by a majority of the user public, the area's percentage contribution to total project visitation, and whether or not the closure of one area would benefit the more efficient use of adjoining areas. With these criteria, divisions were directed to begin immediate action to consolidate and/or close those areas that were considered marginally beneficial.

Divisions have prepared plans to completely close, partially close, and/or consolidate over 400 recreation areas across the country. This action will begin this spring and should be completed by December 1983. However, these actions are based on the reality that public visitation at these facilities does not justify their continued operation. I strongly believe it is better to operate smaller numbers of well-run, safe, sanitary, and attractive parks rather than trying to keep each and every park open under less acceptable conditions. As the public continues to use our facilities, and the use trend continues to climb, we would consider reopening those facilities where increased visitation occurs and if user fees, as proposed in the budget, are enacted. Assumption of the operation and maintenance of the recreation areas by non-Federal interests appears to be a logical alternative.

Flood Control, Mississippi River and Tributaries

The amount of savings and slippage applied to the MR&T Project was $42 million. Most of the reduction was assigned to the construction features. As a result of the favorable bid for the first phase contract on the Old River Auxiliary Control Structure, the savings and slippage reduction did not produce additional significant delays.

FISCAL YEAR 1983 BUDGET HIGHLIGHTS

Budget Perspective

The gross Fiscal Year 1983 budget for the total Civil Works Program is $2.744 billion, about $180 million less than the Fiscal Year 1982 Appropriations. For the first time since FY 1980, new construction starts will be proposed, given the willingness of local sponsors to agree to the proposed upfront financing and cost-sharing arrangements.

Preconstruction Planning Program

The key ongoing preconstruction planning programs are being budgeted at a level compatible with their FY 1982 appropriations. I should note, however, that some preconstruction planning studies and projects added by the Congress in FY 1982 that require follow-on funding have not been included in the budget request because they either were not expected to result in a favorable recommendation for implementation, or would not produce any high priority benefits. For example, Congress added 36 surveys in FY 1982 but nine are not included in the FY 1983 budget. Similarly, two of the three Advance Engineering and Design projects added are not budgeted due to the fact that they are not economically justified at the applicable interest rate. In contrast, 11 of the 12 continuation of planning and engineering studies added for FY 1982 have been budgeted.

Construction Program

The FY 1983 request for construction is $1.209 billion, some $208 million less than the FY 1982 appropriation of $1.417 billion. This level of funding is adequate to maintain schedule on all budgeted projects. Part of this reduction was achieved by deferring the construction of additional recreation facilities at full Federal expense at ongoing projects. We plan to meet with State and local representatives during FY 1982 to determine their interest in cost sharing and upfront financing of these recreation facilities. If there is no interest in the cost-sharing of these facilities, we would limit future new recreation facilities to those minimum facilities required for health and safety reasons. Recreation facilities provide direct benefits which should be cost-shared by non-Federal sponsors. Congress recognized this when Public Law 89-72 was enacted into law in 1965. Our action merely puts the older projects on the same basis as those authorized since 1965.

New Project Construction

As Mr. Gianelli has indicated there are no funds being requested for the initiation of new construction starts at this time. The budget clearly states that a budget amendment will be proposed for those projects where the project sponsors agree to cost share and provide upfront financing.

Recreation Facilities at Completed Projects

The budget request for Recreation Facilities at Completed Projects was significantly reduced primarily because of the lower priority being placed on this type of work. The request for cost shared recreation facilities at completed projects is limited to $4.2 million in ongoing work effort. At the same time, the program for upgrading of existing sanitation facilities is limited to the funding of only one continuing contract, in the amount of $500,000. Most of the work in this program is completed within one year's time; thus, the elimination of new starts essentially restricts the funding to a low level.

Small Continuing Authority Programs

The six Small Continuing Authority Programs are budgeted at essentially the same level as the FY 1982 appropriation of ^36 million. The budget does not propose any new starts in FY 1983 except for the emergency streambank program. Instead, the full amount will be needed to support the ongoing programs. These are good programs but, in order for future budgets to accommodate the new construction starts, it may become necessary to apply guidelines for construction cost-sharing and upfront financing.

Project Operation and Maintenance Program

The FY 1983 Operation and Maintenance General budget request of $1.011 billion approximates the FY 1982 Appropriations of $1.008 billion. However, the funds included for the operation and maintenance of the navigation features of inland, deep draft, and shallow draft projects, together with $20 million for similar MR&T maintenance amount to only $465 million. As Mr. Gianelli indicated, this is $150 million less than the $615 million required to perform moderate operation and maintenance. The user fees sought by the Administration would provide the revenue source for the desired services. Of the $150 million deleted from the operation and maintenance program for the inland waterways and deep draft and shallow draft projects, $144 million applies to work normally funded under the Operation and Maintenance, General Appropriation; the other six million reduction was applied against the MR&T Program.

Flood Control, Mississippi River and Tributaries Appropriation

The Fiscal Year 1983 Budget request for the MR&T is $282 million, about $26 million greater than the Fiscal Year 1982 Appropriation. The increase is driven by a sizable increase of $39 million over FY 1982 requirements to maintain the critical construction schedule for the Old River Auxiliary Control Structure. I still consider this our most critical single project underway, ~~as I~~ discussed last year. While the existing flow lines were reviewed and found to be inadequate following the hurricanes of 1960's and the 1973 flood of record, the levee work remains of high priority, and we will continue to focus on the most critical areas of deficiency. The $6 million reduction for maintenance, which I mentioned, will come from the dredging program, and the maintenance of revetments and dikes will be reduced.

NEAR-FUTURE TREND IN CORPS WORKLOAD

Background

The Corps workload has changed over the years. The dollar value of the overall Civil Works program has fallen even with the continued increase in the operation and maintenance portion of the budget. A viable construction program requires developing a proper mix of needed, priority projects which are responsive to the future water needs of the nation, and which local interests are willing to support. We are helping Mr. Gianelli find projects that local interests will support and help finance. We also have made major changes in our planning process and cut down on the repetitive review so that high priority reports can be completed in a more timely and more economical manner. The successful implementation of this Administration's financing and cost-sharing initiatives should allow us to restore an equitable balance between construction and operation.

Preconstruction Planning

Starting in FY 1982 we have begun the continuation of planning and engineering for 30 projects with the objective of advancing some of the necessary preconstruction planning without delay and thus facilitate the start of construction following authorization. In FY 1983, funds for 27 of the projects are being budgeted. In addition, funds for 34 authorized projects are included in the FY 1983 budget request for advance engineering and design. Over the next few years, we would expect that our budget would focus preconstruction planning efforts on those projects that local interests will support and help finance.

Construction Program

Since passage of the last Water Resources Development Act, in October 1976, the number of regular projects under construction, exclusive of MR&T, has dropped from 254 projects in FY 1976 to the 159 projects being funded in the FY 1983 budget. The FY 1983 budget provides for completion of 26 of the 159 projects in FY 1983. We are hopeful that the new innovative financing proposals described by Mr. Gianelli will enable us to move ahead on those projects ready for construction. In this regard, tentative funding targets for FY 1984 to 1987 include an allowance for new construction starts beyond those which I mentioned for FY 1983.

Project Operation and Maintenance

The request for work funded under the Operation and Maintenance, General Appropriation is close to equaling the budget amount for the Construction, General Appropriation. I expect the Operation and Maintenance program to continue to represent a significant portion of our employment and funding requirements. However, looking into the future, I expect that the intent to reduce the operation and maintenance of low priority facilities, as well as the associated workforce, will continue, unless some form of reimbursement at the state or local level is forthcoming to help reduce the level of direct Federal outlays for these services.

Dredging Program

The studies on the minimum dredge fleet directed by Public Law 95-269 have been divided into two parts. The first part on determination of minimum hopper dredge requirements has been furnished to the Office of Management and Budget for their review. We have briefed the private dredging industry, interested water transportation organizations and other concerned Federal agencies on the determinations in the second study on non-hooper dredge requirements, and we are now in the process of preparing the final report. It is our plan to forward this document to OMB in April of this year.

There is a continuing need for the defense or emergency missions of the minimum fleet, as mandated by law. However, I expect that legislation for both deep draft and shallow draft channels and harbors ultimately will result in a reduction in the amount of the total annual dredging yardage performed under Corps auspices to the extent local interests perform this work on their own or choose to defer such dredging. We recognize the importance of harbor and waterway dredging to the users of all such facilities. Enactment of user fee legislation acceptable to the administration will be necessary before future budget requests can include sufficient funds to perform such work on low volume, high cost projects.

Regulatory Program

I am aware of the potential for change to the legislative authorities for our Section 10 and Section 404 regulatory program. This program, which helps regulate the use of the Nation's waters, is currently undergoing some substantial changes, primarily as the result of our efforts to streamline the permit process and the revisions under consideration by the Vice President's task force. Based on these changes, there will be significant relief from unnecessary regulatory burdens. I can say that in the future the public will have a lesser need to apply for individual permits and, when required, the permits will be obtained with less time and expense. One of the biggest changes stems from an expansion in the use of our regional and nationwide permits. We are hopeful that the system will become more streamlined as we seek to give the states more responsibility and allow the District Engineers more decision authority over the permit application.

Natural Disasters

The advance preparation for emergency activities is being funded under the Operation and Maintenance, General Appropriation Account in the FY 1983 budget. This contrasts with past years when such funds were included under the Flood Control and Coastal Emergency account. While the expenditures for flood related disaster response and recovery have been unusually high over the last 10 years, the level of Corps emergency activities varies from year to year. This makes it very difficult to project the required funding and manpower. In view of both the uncertainty and of the fiscal constraints, the FY 1983 budget does not include any new funds for the emergency fund. As long as the budget constraints continue, I expect that supplemental appropriations will be sought when and if major disasters occur and the Corps responds.

We continue to monitor the potential for emergency situations across the country. These include the significant snowpacks in certain parts of the country, the areas with saturated ground conditions and high river flows, and the special problems for the rivers around Mt. St. Helens. During two recent flood events on the Toutle and Cowlitz Rivers, the protective measures built by the Corps worked well and only minimal damage occurred. However as a result of these floods, the two debris retaining structures and the eight sediment basins in the Toutle River basin are all filled. In additon, significant infill has occurred in the Cowlitz River extending from its confluence with the Toutle River downstream to Castle Rock, about a three-mile reach. For the urban areas along the Cowlitz River, the current level of protection is in the 100-year to 500-year range. Based on these findings, we do not expect any major problems to develop in the near future. However, in the event that a threat to life and property does occur, we would utilize available emergency ~~funds and, if needed, borrow~~ from other appropriation accounts. For the long term, the budget includes funds for a reconnaissance phase study of the Cowlitz River basin to identify any economically and technically sound permanent solutions to the sediment problem.

Another example of our capability to respond quickly to an emergency event in adverse weather conditions is our response to the Air Florida plane crash in January. At that time the Corps, in conjunction with other DOD elements and other Federal agencies, provided significant manpower and equipment in support of the recovery operations. The Corps has a long and proud history in response to and recovery from a wide range of disasters and emergencies. I am committed to maintaining that capability. I do believe that this budget, austere as it is, does allow us to maintain nearly all the emergency and mobilization capability that the Nation expects.

MANPOWER CONSIDERATIONS

Programmed Reductions

As part of the President's Program to reduce the Federal workforce, reductions are being effected in the Corps Civil Works program. Reductions to the Corps authorized manpower work-years have been imposed for both FY 1982 and FY 1983. This will require the elimination of about 2,000 Full-Time Permanent (FTP) spaces in the Civil Works program during FY 1982. We have completed plans to achieve the FY 1982 reduction with the objective of minimizing the loss in key job functions that will be needed to handle our future workload. The reduction for FY 1983 amounts to 1,609 Full-Time Equivalent (FTE) workyears of which 1,417 must come from FTP personnel. This will require a reduction of 634 FTP positions in FY 1983. It is expected that some of the positions affected by the reductions will be absorbed by an increase in Corps spaces allocated for support of the military program. In the meantime, we are now studying the most effective and fair way to achieve these FY 1983 reductions. Reductions will be imposed at all levels. Consideration was given to closing certain low work-load districts as part of the Fiscal Year 1982 manpower reductions. However, legislation passed by the Congress prevented us from doing this. In my view, the Corps could manage these reductions better if all available options were considered.

Perspective

We are approaching a critical point in time. The Corps workforce for the Civil Works program has been materially reduced by some 20% over the last decade and a half. The FY 1982 and FY 1983 staffing requirements are predicated on contracting out, and eliminating or transferring certain activities heretofore performed by in-house workforce. The staffing figure reflects the full-time and seasonal manpower associated with a significantly reduced dredge fleet and the assumption of all incremental dredging work in excess of our fleet's capability to be done by the dredging industry. As noted earlier, the staffing figure also reflects a marked reduction in Corps support of recreation sites and turnover of such responsibility to non-Federal interests.

The remainder of the Corps workforce is allocated to those activities that are manpower intensive and that involve technical expertise that is vital to the Corps Civil Works mission as well as the support provided other Federal agencies, the States in time of natural disasters, and the Department of Defense in time of mobilization. Significant personnel reductions already have been made in the area of the Corps planning and engineering functions, and a contract level of some 30-35 percent is expected to be reached in FY 1982. Construction management expertise from the ranks of our Civil Works workforce has been used to expedite construction of airfields in Israel, support the EPA construction grant program being funded under the Clean Water Act, as well as assist in the recovery effort for such natural disasters as Mt. St. Helens. I have every confidence that we will be able to meet such demands in the future, albeit at a reduced level. On an interim basis, a portion of the construction expertise will be shifted to our military program starting in FY 1982 and continuing into FY 1983. As Mr. Gianelli noted, we also will be providing assistance to the EPA in order to help that agency execute its superfund program.

The FY 1983 budget request of $5.0 million for Mobilization Readiness Planning is an increase of $1.6 million over FY 1982. The funds budgeted will provide staffing levels for mobilization planning specialists required to accelerate the development of national emergency preparedness plans, to initiate training of personnel in newly identified responsibilities during a national emergency, and to more fully participate in Readiness Exercise 82. We also are evaluating plans to ensure the maximum responsiveness of the Corps during a national emergency. Our mobilization readiness planning efforts are coordinated with FEMA, DOD and other agencies. These actions are all essential to improving the Corps readiness and capability to manage the tremendous engineering and construction support missions which would be required during mobilization.

O. & M. USER FEE PROPOSAL

Chairman HATFIELD. Thank you very much, General Bratton.

Gentlemen, let's get down to one of the very basic, controversial issues that arises in your testimony today. That relates to a user fee or tax for waterway operation and maintenance. Mr. Secretary, on page 7 of your statement, you mention the elimination or reduction in operation and maintenance work in fiscal year 1983 budget in the amount of $150 million and you say:

> The Corps of Engineers will have to restrict its maintenance to the highest priority options if Congress does not enact legislation for waterway user charges.

Would you care to comment in detail on how and why this policy proposal arises in your funding request, because, as you know, the Appropriations Committee does not have jurisdiction for that kind of policy legislation? The committee would also be interested in knowing why there is a high degree of optimism from members of the administration about the enactment of user fees when Congress has been considering various fee proposal now for, I believe, 5 years and failed to come to any conclusion.

Mr. GIANELLI. Yes, Mr. Chairman, I think the problem the administration faces is that the O. & M. budget has about doubled in the last 10 years for navigation projects. I think, as I recall, the budget requirement this year will be about $615 million, and I think the administration has felt there has to be some turnaround with respect to operation and maintenance cost. And, so, what we have done is to ask the Corps to take a look at those projects which have high costs and, perhaps, eliminate them to the tune of about $150 million with the hope, of course, that, if user fee legislation passes, money would be restored, making it unnecessary to make that reduction.

The Corps has prepared a set of criteria which would relate to implementation of that reduction. I think that has been made available to your committee, Mr. Chairman. And I think also there has been a tentative list of projects that might fall within that $150 million reduction. But, I would hasten to say that, since the initial list has been supplied, we have asked the Corps to examine those projects which appear on the reduction list to see whether or not there should be any substitutes with the objective still of providing the $150 million reduction in operation and maintenance costs if there is no user fee legislation that is adopted.

That is the general background and the general parameters upon which we are proceeding.

ADVERSE ECONOMIC IMPACT OF NEW CRITERIA

Chairman HATFIELD. Have you examined the economic impact of this change in criteria—the adverse economic conditions that may exist in some of these areas?

Mr. GIANELLI. The Corps has made a preliminary evaluation of the impact and one of the things they are going back and doing now, is to take a look in more detail at the impact of those projects that are included in the reduction under the criteria the Corps assumed. I would expect that there would be some substitute list sent up to the Congress identifying other projects that might be listed in the reduction for some of those that are now in the list.

Chairman HATFIELD. Do you have any information as to whether the House and Senate authorizing committees have a viewpoint on the proposal that is implied here, if not totally explicit—mandating user fees through the appropriations process?

Mr. GIANELLI. Let me say, generally, that I think I would be very wrong if I didn't candidly state that the authorizing committees are viewing this with something less than enthusiasm. [Laughter.]

Chairman HATFIELD. I would imagine.

Mr. GIANELLI. And I would say that is an understatement.

HISTORICAL PERSPECTIVE

Chairman HATFIELD. Mr. Secretary, I would invite you to get together sometime and discuss this whole user fee matter, because the administration's proposal in my estimate, in my assessment, is not going to fly and for one simple reason—I don't think they have read their history carefully in the development of this great republic because, as I see it, their proposal returns us to the period of the Articles of Confederation when the States, after the Revolution, began a warfare of port against port, each having their own tariffs, each having their own fees and restrictions.

And one of the reasons that we had a meeting in Philadelphia was to correct that problem and that is the basis of the Commerce Clause of the Constitution. And that was that waterways, navigable waterways, particularly oceangoing ports, were to be a Federal jurisdiction under uniform control and uniform policy.

Now the administration's proposal is to go back and have it on a port-by-port basis recreating that whole sad experience that we had under the Articles of Confederation.

Mr. Secretary, that will not fly. I can assure you that the general temperament of people that I have talked to who represent States and oceangoing ports are today overwhelmingly against user fees. I happen to be one who represents a coastal State who supports the concept of user fees, but not on a port-by-port basis but rather under similar conditions we have with the Interstate Highway System and the airport development program—a uniform fee assessed to all incoming and outgoing cargo to raise the resources and the finances.

Do you think we would have built the Interstate Highway System with the concept that is being advocated by the administration as it relates to ports? You would never have gotten a highway through South Dakota, you would only have gotten half way to the State of Oregon if you depended on those revenues raised within the confines of those jurisdictions. We set up a national trust fund and, as a result, were able to build a national system of highways and airports.

I can't for the life of me understand who dreamed up this concept that is being promoted by the administration to balkanize this country as it relates to water navigation.

NEED FOR ALTERNATIVE FINANCING

Mr. GIANELLI. Let me explain what I believe is, in part, the administration's frustration with this problem. Senator, if you take a look at needed water projects, for example, that could well be justified the rest of this decade, you can rapidly reach a figure that approaches $20 to $30 billion without any trouble at all. And one of the problems we see is that from the standpoint of past appropriations, from the standpoint of the budgetary constraints, there is just not this kind of money to carry out the construction program that we think is needed.

So, I think what the administration is trying to do is find some other way of financing these projects and to obtain cost recovery in other than the traditional methods because of the huge costs involved.

Let me move on to the specific proposal. The administration has set forth the proposal to which you referred. It is not being received, as you indicated, with any enthusiasm by very many people, if anyone. But let me indicate to you that I don't think the administration is locked in concrete with respect to that specific proposal.

But, let me add, we have tried very hard to work, for example, with some of the port groups to see whether or not there are some sort of alternatives that might be partially acceptable to them and acceptable to the administration. I personally promoted a meeting with the Office of Management and Budget and with the Department of Transportation just before the holidays to see if there wasn't some other proposal we might be able to pursue that we can jointly agree on.

That port group which represented the small ports and large ports rejected any proposal and said, "We want it the way it is."

Now, that presents a problem to the administration, as I indicated. We just don't think the funds are available to carry out the work that has to be carried out. And what we are trying to do is develop some way of innovative financing and cost sharing to allow some of these projects to go ahead.

Now, the program that I alluded to in my statement for 1983 is one that we in the Department of the Army are trying to set forth for 1983 to break this logjam. While it may be unpalatable to a lot of people, and maybe it is not acceptable, I wanted to say, Senator, that we have selected 12 authorized projects. We are talking to the projects sponsors now with the idea of trying to work out some innovative financing to get some of those projects started, and we have been making pretty good progress.

So, what I guess I am trying to say in response to the question—and it is a long-winded reply which I apologize for—is that we think the Goverment has a financial problem that has to be addressed, and we don't think the historical way of meeting that problem can be successful, given the constraints and the demand on the Federal budget from other areas.

What we are trying to do is to develop a new approach to financing Federal water projects that will allow us to move ahead. The cost recovery bill is one effort in this regard.

Chairman HATFIELD. I hope you will take a look at the bill that I propose, because it does have broad support among the Great Lakes ports, the eastern ports, and the gulf ports. You are not going to get any piece of legislation upon which all the ports within the association of ports are going to agree. But there is more concensus on my bill than any other bill or idea that is floating around. And I am sure that you are aware that my proposal has been revised. Consequently, I am not locked into concrete either. I am saying you don't have to start searching for an alternative. There is an alternative already—the legislation I have introduced. I would think if the administration could take a look at that more seriously and indicate more flexibility, we could move ahead with some user fee legislation that is more acceptable than what we have under the administration's proposal.

Mr. GIANELLI. We will be glad to work with you in that regard.

MOUNT ST. HELENS EMERGENCY WORK

Chairman HATFIELD. One last question from the Northwest delegation, Senator Jackson, Senator Gorton, Senator Packwood, and myself, with regard to the Mount St. Helens. What do you plan to do as far as emergency work in fiscal year 1982 on the Toutle and Cowlitz Rivers in the State of Washington?

Mr. GIANELLI. We had a long discussion with Senator Jackson and a number of people from Cowlitz County this week. There is a proposal in the 1983 budget for a $250,000 study, now that that initial disaster is a couple of years behind us, to evaluate what ought to be done.

I can certainly sympathize with the people up there. We have a continuing problem and that Mount St. Helens disaster is unlike most national disasters that we have had in that it is going to be with us for a long period of time.

The Corps of Engineers has spent some $275 million on disaster relief in trying to correct some of the problems up there since the disaster occurred. And we will still be monitoring it, but our proposal now is to try and take a look at that whole problem up there now that it is 2 years after the initial eruption and to see what needs to be done in the long haul because their problem is going to be with us a long time. That is what we are proposing to do.

SEDIMENT RETAINING STRUCTURE ON TOUTLE RIVER

Chairman HATFIELD. Instead of spending $250,000 for a study, may I show you a picture of the breech in the sendiment retaining structure on the Toutle. This is something that exists now. Do you have any plans to deal with that? The breach will widen and you are going to lose the investment you have made unless it is corrected.

Mr. GIANELLI. It will create certain new problems. I am not sure that will solve all the problems that exist up there.

Chairman HATFIELD. I am not suggesting that all the problems are long range. I am saying this is an emergency of the moment.

Mr. GIANELLI. I understand. There are other emergencies there too that should be addressed, but that is certainly one of them.

Chairman HATFIELD. General Bratton, in your professional judgment, shouldn't we make repairs to this structure and dredge the sediment out from behind these structures in order to protect Federal investments in earlier work and reduce dredging requirements on the Cowlitz and Columbia Rivers?

General BRATTON. Sir, we are currently evaluating the situation at the N-1 structure to determine what, if any, action should be undertaken. Our Portland district is currently determining costs and impacts. The debris retaining structures were planned, designed, and approved as temporary structures to be breached when their use was no longer needed to help provide emergency protection to the Cowlitz River channel. The cost effectiveness of excavating behind these structures rather than downstream in the Toutle, Cowlitz, or Columbia Rivers will be reviewed.

Chairman HATFIELD. You have seen this picture?

Mr. GIANELLI. Yes, sir; I have seen a blowup of that picture that the Cowlitz people brought in and I think the Corps showed me a similar picture yesterday.

COLUMBIA RIVER CHANNEL DREDGING

Chairman HATFIELD. Do you have sufficient funds in the fiscal year 1983 O. & M. budget to maintain the Columbia River channel to authorized project dimensions?

Mr. GIANELLI. I think there are funds in the operation and maintenance budget for Columbia River; yes.

Chairman HATFIELD. On the Columbia, this is for project dimensions that I asked the question.

Mr. GIANELLI. Let me defer to the Corps with respect to that.

Chairman HATFIELD. I would like to nail this down precisely as to the project dimensions.

General BRATTON. There is no money in the budget specifically to fix the breach, but there are fiscal 1982 funds that could be made available for it. The basic problems are two: One, the breech itself, and two, the fact that there have not been funds provided for dredging, removing all the siltation materials that have collected behind the debris structures that were built. With respect to project dimensions in the Columbia River, that Secretary Gianelli asked that I address, at the time the fiscal year 1983 budget was formulated, we estimated that the budget request would maintain channel dimensions on the Columbia River. However, with subsequent developments, we now estimate the 15 million cubic yards of material will enter the Columbia River from the Cowlitz River and that 8 million cubic yards will be deposited. The budget request will provide for removal of 3.5 million cubic yards of sediment leaving 4.5 million cubic yards not provided for. We do not yet know what the impact will be from the March 19 eruption of Mount St. Helens.

IMPACT ON INTERSTATE ROUTE 5

Chairman HATFIELD. One of the problems we face is the possible washout of the interstate highway and bridge in that area. During flood the high water and sediment could take out two of those major bridges in the State of Washington—Interstate 5.

General BRATTON. Interstate 5 is a particular problem.

Chairman HATFIELD. And some are railroad bridges as well.

We have other questions prepared by the staff, but, I don't want to take any more time. I want to defer to my colleagues for questions, but we will submit, Mr. Secretary, general questions for you to respond in writing, if you will. We will put those in at the end of the hearing.

I wish you would take another look at the breech in the debris retaining structure which concerns us all because of the vulnerability of people and communities. It seems to me when you have a breech that large already in that structure, there ought to be some kind of action or plan to protect the investment that has already been made, otherwise you are going to find more and more of that revetment eaten away and destroyed. In addition, you have lost the ability to retain the sediment before it moves down into the channels of the Cowlitz and Columbia which would increase the cost of maintenance later on.

FLOOD CONTROL AND COASTAL EMERGENCIES

Chairman HATFIELD. General Bratton, Public Law 99 authorized an emergency fund, to be replenished on an annual basis, for flood emergency preparation, flood fighting and rescue operations or for repair or restoration of flood control work threatened or destroyed by flood.

What is the current status of funding available for flood control and coastal emergencies?

General BRATTON. Sir, there is currently $7.8 million in unallocated funds available in the Public Law 84–99 emergency fund to undertake emergency response activities.

Chairman HATFIELD. Can you give the committee some idea, dollarwise, how the Public Law 99 authority has been utilized annually for the last 10 years?

General BRATTON. Yes, sir; I can provide that for the record.

[The information follows:]

Annual utilization of Public Law 84–99 funds for the last 10 years are as follows:

Fiscal year:	*Expenditures*
1972	
1973	$9,741,167
1974	80,537,724
1975	108,786,194
1976	72,682,062
1976 "T"	65,784,200
1977	4,517,436
1978	12,957,830
1979	16,623,033
1980	34,795,902
1981	75,805,323
	210,715,068

Chairman HATFIELD. Is it your professional opinion that sufficient resources are available in the emergency funds to cover likely contingencies for the remainder of 1982 and fiscal 1983?

General BRATTON. Sir, in light of the current tight budget situation and the status of our known requirements, I felt there were adequate emergency funds to meet likely contingencies. Even though the average annual expenditures from the emergency fund—excluding Mount St. Helens—are in excess of $45 million, my answer to your previous question on annual expenditures highlights the tremendous year-to-year fluctuation in requirements. My decision to not request funding was based on the knowledge that all known fiscal year 1982 requirements were funded; the fiscal year 1983 advance preparation program was included in the O. & M. budget; approximately $8 million in emergency funds remained unallocated; and I have the capability to draw funds from other appropriations if required to meet emergency needs. However, numerous rehabilitation requirements are now being identified due to recent flood events in the Pacific Northwest, California, and Missouri, and we are currently involved in a major flood emergency in Ohio, Indiana, and Michigan where extensive rehabilitation actions are also likely. As the funding requirements for these activities are more clearly defined, I will be better able to determine whether actions should be undertaken to secure supplemental funding to support the required response activities.

Chairman HATFIELD. Mr. Gianelli, in the event that emergency funds are not available to cover natural disasters through 1983, what would be the administration's policy on requesting sufficient funding to cover such emergencies and repay funds borrowed from other civil works projects to cover the immediate response requirements?

Mr. GIANELLI. Sir, I recognize that natural, as well as manmade disasters, occur for which funds cannot be programed and which require immediate response with available resources that can include funds from other appropriations. As the administration has approved and supported the programs from which funds may be borrowed, it would be appropriate for us to support replacement of any borrowed funds to insure that the programs are accomplished as planned and scheduled. However, I would be hesitant to support a large contingency emergency fund for which specific requirements have not been identified.

PROGRAM EXECUTION

Chairman HATFIELD. Last year, the Congress provided funding at about the same level as that appropriated for fiscal year 1981 for Corps of Engineers activities. Do you feel that the level of funding for 1982 is sufficient to carry out the work scheduled and approved by Congress?

General BRATTON. I view our execution of this year's program very favorably. We are, to the maximum extent possible, complying with the fiscal year 1982 appropriations bill. Our general investigations and construction, general programs are on schedule and I expect no major impact on our higher priority operation and maintenance projects involving commercial navigation. However, lower use waterways and harbors will receive less maintenance dredging and other operational and maintenance funds than in previous years. Our program on the Mississippi River and tributaries are well on track.

Chairman HATFIELD. Will the Corps have sufficient resources to cover anticipated contractor earnings for the remainder of fiscal year 1982?

General BRATTON. We anticipate no problems in covering contractor earnings in fiscal year 1982.

Chairman HATFIELD. There has been much discussion in recent months regarding high interest rates and their impact on the construction industry. Could you discuss this from the Corps' experience and perspective?

General BRATTON. Sir, high interest rates, inflationary pressures, and a lack of work in general have had an adverse impact on the construction industry. The Corps has taken several steps to ease the burden on contractors. We have reduced contract sizes and durations to make it easier for the contractor to get bonded and obtain financing. We have also encouraged the districts to increase the use of the mobilization clause and to make prompt payment. These actions should reduce the contractor's cash flow problems and financing requirements, thus resulting in lower bids.

Chairman HATFIELD. What adverse impact does high interest rates have on the Corps' ability to manage the construction and O. & M. programs?

General BRATTON. Sir, most of the impacts to our program have been positive. The lack of construction work has caused increased competition and lower bids. In fiscal year 1979, we received an average of 4.35

bids per contract. In fiscal year 1981, this increased 60 percent to 6.95. This surplus of contractor capability and equipment has caused contractors to mobilize more equipment early in the contract. As a result, work and earnings are proceeding at a slightly faster rate than anticipated

USER FEE AND INNOVATIVE FINANCING ISSUES

Senator Stennis.

Senator STENNIS. Mr. Gianelli, it is fine to see you again. You used to come before this committee representing the great State of California. You were so well prepared and had such good projects—we have given you about everything you asked for and there wasn't too much left for the rest of the country. [Laughter.]

Mr. GIANELLI. I don't know, I think the Mississippi River has done pretty well.

Senator STENNIS. Now we find you coming here with this impossible situation that the chairman already referred to—the changes in policy on user fees and project financing that is included in the budget which, in effect, says if the Congress does not agree, you are going to do without. That is about as quick a summary of the situation on the maintenance of the waterway problem with ports.. We know that doesn't fit your stature at all. You are a constructive man and a realistic one.

That recommendation alone—I am not trying to take it out on anyone, but it shakes my faith in the many other recommendations in the budget. Whoever inspired that one didn't know the subject matter.

So you are going to take that and do the best you can with it. As I see the overall budget problem, we made a little headway last year; we are going to make a little more this year. But I don't believe these policy changes fit in at all with these demanding situations we are confronted with as a whole—the economy, interest rates, unemployment increases that are already in the critical stage.

So, I think the session will wind up in addressing itself mainly to problems of that kind and these other issues will have to find another time and, really, a better way.

TENNESSEE-TOMBIGBEE WATERWAY

STUDY OF IMPACTS OF WATERWAY USER CHARGES AND TAXES

Senator STENNIS. Mr. Gianelli, in 1978 Congress enacted the Inland Waterway Revenue Act of 1978—title 2 of Public Law 95–502 established a fuel tax on commercial users on the inland waterways. That tax was initiated at 4 cents a gallon with a provision for regular increases until it reached a level of 10 cents a gallon in 1985.

Section 205 of Public Law 95–502 instructed the Secretary of Transportation and Commerce and other departments, including your Office, to carry out a study of the impacts of waterway user taxes and charges. As I understand it, the administration has completed a study which addressed some but not all of the questions raised by the Congress. Did your Office have an opportunity to review this study?

Mr. GIANELLI. Yes, we did review the draft summary report.

Senator STENNIS. There are many aspects of this study of interest to me, but it has been brought to my attention that the study identifies certain major river segments whose present traffic could not pay the full current—again the current costs of operating these segments together with the costs of the new construction.

Although the study estimates the user charge required to recover 1977 Federal operations and maintenance costs for 20 river systems, there was no estimate provided for the segment labeled "Tenn-Tom" because, according to the study, there was "no traffic at present." And even though no estimate was calculated, the Tenn-Tom segment was included in a listing of high-cost/low-volume waterways which would not have sufficient future traffic growth projected for them to become viable under a cost recovery system based on segment-specific user charges.

This statement has been interpreted by the opponents of the Tennessee-Tombigbee Waterway as a statement of the administration that the Tenn-Tom project is not a sound capital investment. Therefore, for purposes of clarification before this committee which has supported this project, I have several questions which I would appreciate your response.

Now, if these facts that I refer to go beyond your immediate observation on these facts, you just say so.

RECOVERY RATE

There has been much said about the cost of operation and maintenance in various waterways and whether these costs warrant continued project operation or could be supported by tonnage moved. In regard to the Tennessee-Tombigbee Waterway project, what will be the rate for recovery when it becomes fully operational for navigation movements over the completed length of 234 miles?

Do you have available facts to answer that question?

Mr. GIANELLI. I think the Chief is prepared to respond.

General BRATTON. We have looked at that from the standpoint of the whole waterway and the full flow of the predicted traffic and we calculate about 1.9 mills per ton-mile when the waterway is fully operational to take care of all of the operation and maintenance cost.

TON-MILE FEE TO RECOVER CAPITAL EXPENDITURES

Senator STENNIS. Well, moving on then to my other questions to get them all together. What would be the ton-mile fee? What would be needed to recover capital expenditures under the administration's new legislative proposal?

General BRATTON. Recovering the capital expenditures from the fiscal 1983 funding and thereafter would be about 3.7 mills per ton-mile, including an allowance for future inflation.

Senator STENNIS. As related to expenditures from now on out?

General BRATTON. The construction cost invested in the Tennessee-Tombigbee project prior to October 1982 is not contemplated to be written off in this fashion. Only those costs effective after October 1.

COMPARISON WITH OTHER WATERWAYS

Senator STENNIS. Completing this picture, how does this rate compare with the other waterway segments?

General BRATTON. In the center. Let me explain. Some of the large very high use waterways like the lower Mississippi and the Ohio River systems have a ton-mile rate of about 0.6 or 0.7 mills per ton-mile. Others of our smaller waterways go well above that up to 2 or 3 cents per ton-mile. I think if you took the entire waterway system in the Nation as it is operating and you compare it on a comparable basis with the Tennessee-Tombigbee, the average would be about 1.4 to 1.5 mills, whereas Tennessee-Tombigbee would be just slightly above that 1.9, as I said.

JUSTIFICATION

Senator STENNIS. One last question. As I understand the current situation, the project was evaluated in accordance with criteria applicable at the time of project authorization and again at the time of initial appropriation of funds for construction and found to be justified, and that it continues to be found justified with each reevaluation through the appropriation history, and that now with the administration's proposed change in the Federal policy regarding user charges, that the Tennessee-Tombigbee project remains a viable waterway project.

What is your answer to that?

General BRATTON. No question, it does, it remains viable. The ratio of remaining costs to remaining benefits is quite favorable at about 2.8 to 1, and none of these other factors have altered the basic conclusions—it is an economically viable project.

Senator STENNIS. So, with your facilities and expertise and professional capacity you and the other members of the Corps have made your calculations on this matter and have found these answers to be as you have given us. Is that right?

General BRATTON. That is correct.

Mr. GIANELLI. Can I make a further observation?

Senator STENNIS. Yes.

Mr. GIANELLI. Senator Stennis, if I may, I would like to point out that the Tennessee-Tombigbee project through 1982 would have $1.3 billion spent on it, and if you take the 1983 appropriation which the administration has requested of $186 million, there then remains after 1983 only $219 million to be spent on this project to make it operable from a navigation standpoint.

It seems to many of us we should quit talking about spending our efforts to stop this project which is so far along and get it to completion so it can complete the original mission. And that is the aim of the adminstration.

Senator STENNIS. Thank you for your remarks and observations. You are competent to make these calculations.

We have a few other questions on this but to move along now, I do have three or four short questions here relative to other items in the bill, if I may ask consent to have those inserted in the record.

Chairman HATFIELD. Without objection.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR STENNIS

GREENVILLE AND VICKSBURG HARBORS

Question. There are a great number of projects that have been studied by the Corps of Engineers, found to be justified, and forwarded to your Office for further action. I know many of these have been held up by the Water Resources Council and the Office of Management and Budget for various reasons. Would you tell me, generally, what your plans are for getting them to the Congress for its consideration? I would also like a report as to the status of the Greenville and Vicksburg Port studies and when they might be expected to clear your Office. I believe they have been in and out of your Office for 2 to 3 years.

Answer. It seems to me that we need to determine that these projects have a good chance of implementation. Toward that end we will be checking with a number of project sponsors to determine their willingness to provide financing and cost sharing.

The Greenville Harbor report was returned to the Chief of Engineers in 1979 for modification. I understand that we will be receiving a supplemental Chief's report in the near future. Our initial review of the Vicksburg Harbor report is complete and we expect to forward the report to OMB soon. Before we are able to do that, however, we will need to understand the relationship between this project and the cost recovery proposals for inland waterways set forth by the administration.

GULFPORT AND ROSEDALE HARBORS, MISS.

Question. I am greatly distressed that you have proposed not to maintain a great number of our smaller but thriving ports unless the Congress passes your proposed user fees. I cannot accept that the Government should abruptly abandon their part of the bargain when these ports were built. In my own area, I am thinking of our port of Gulfport, a key facility for the banana trade and the river port of Rosedale, Miss., that has just been built and is blossoming into a fine activity attracting considerable industry. If Congress should not favor the establishment of these user taxes, would you object to the Congress providing for the continued maintenance of these facilities?

Answer. The administration will be concerned, of course, about actions which increase the budget. However, until the Congress enacts a bill and actually sends it to the President for his consideration, it is premature to offer an opinion as to what my objections, if any, might be. I would hope the focus of our efforts would be on cooperation, not confrontation.

PERMIT PROCESS

Question. One of the more vexing problems on which I receive much mail is the inordinate time and complexity involved in getting permits from the Corps of Engineers. This involves private citizens as well as government agencies, such as the State highway commissions, county, and city governments. I understand you are working with other agencies such as the Fish and Wildlife Service and the Environmental Protection Agency to streamline procedures to, hopefully, speed up the process. How are you progressing on this matter and when do you expect to be able to offer some relief?

Answer. I submitted my comprehensive recommendations for streamlining the Corps' regulatory program to the Presidential Task Force on Regulatory Relief on January 29, 1982. Pending further instructions from the task force, I have tasked the Corps with the implementation of those of my recommendations that require only administrative actions. Some of these recommendations, such as the development of new procedures for implementing NEPA, cultural resource legislation, and section 404(q) of the Clean Water Act, will require further coordination with other Federal agencies. The elimination of duplication among Federal programs and giving States more authority for administering the program are major objectives that will be given immediate consideration in conjunction withthe Corps' general permit program. Finally, new procedures for defining the jurisdictional limits of the Corps' regulatory program are being developed.

SOWASHEE CREEK FLOOD CONTROL STUDY

Question. I note the budget contains $38,000 for the completion of the Sowashee Creek flood control study. Is this amount still adequate and are you on schedule to meet your March 1983 completion date?

Answer. Yes sir; $38,000 is considered adequate for phase I study completion and our current completion date is still March 1983.

PASCAGOULA HARBOR STUDY

Question. I note you have slipped the completion date of the Pascagoula Harbor deepening study from September 1983 until June 1984. Would you give me an explanation for this slippage and actions you may be taking to minimize it. I note you have programed $300,000 for 1983 for the study. What is your capability?

Answer. This study has slipped 9 months for several reasons. Much of the environmental information needed in this study is being produced by the Mississippi Sound study, which has slipped 5 months. Also, other study requirements, including stringent shipping requirements of liquified natural gas, cultural resource investigations, and evaluation of possible upland disposal areas have caused the study to slip an additional 4 months. We are currently reevaluating our schedule in an effort to regain the 4-month slippage. The budget request is our fiscal year 1983 capability on this study.

PEARL RIVER AT JACKSON, MISS.

Question. I have a series of questions pertaining to your study of flood control on the Pearl at Jackson. In the report on fiscal year 1982 appropriations, this committee directed the Corps to proceed with separable items identified in the district engineer's draft report of August 1981, which could be initiated under the provisions of section 205 of the Flood Control Act, as amended. Can you advise the committee of your progress in that regard?

Answer. Further investigations of the Jackson early action portion of the study have revealed that removal or modification of the most upstream ICG railroad bridge is not economically justified. The river bend cutoff at the former Jackson sanitary landfill and the removal of material obstructing the flooding at the State Highway 25 bridge are being evaluated at the present time. Because we have been requested to apply the principles of section 134A of the 1976 Water Resources Development Act, which considers the inclusion of improvements by local interests in the scope of Federal projects later authorized, it seems appropriate to report on these measures in the interim report due to be submitted by the Division Engineer in September of this year. In that way, the two measures can be evaluated as an integral part of the clearing plan and the report will be submitted to Congress, who would then have the opportunity to authorize the application of local expense to the local share of project costs. A letter report is currently being prepared by the district engineer, recommending that the early-action plan be reported in that manner.

Question. One of the potential items you identified for early action involved the removal of an obstructive railroad bridge, including some minor adjustments to trackage to maintain local service. Have you been able to reach a satisfactory arrangement with the railroad so that this work could proceed?

Answer. The railroad has no objection to us removing the bridge. However, the latest economic evaluation shows the plan is not economically feasible. Costs are being reviewed at the present time.

DRY RESERVOIR

Question. You mentioned that a dry reservoir located just upstream from the existing Ross Barnett Reservoir would be very effective in reducing flood damages in the Jackson area and immediately downstream. How does that solution differ conceptually from the Edinburg Lake project which was authorized for phase I planning by Public Law 93-251?

Answer. The Edinburg Lake project was authorized for phase I planning in the Water Resource Development Act of 1974 (Public Law 93-251) for flood control, improvement of water quality, water-related recreation, fish and wildlife enhancement, and area economic development. The Edinburg Lake project would control 827 square miles of drainage area, or about 26.7 percent of the Pearl River basin upstream from Jackson, Miss. The project would have reduced the stage of the Easter 1979 flood at Jackson by less than 1 foot and would reduce average annual flood damages from Pearl River flooding by about 40 percent. A permanent conservation pool of about 12,700 acres would serve other project purposes.

The Shoccoe Dam would be located in the headwaters of the Ross Barnett Reservoir and would control 2,700 square miles of drainage area, or about 87 percent of the Pearl River basin upstream from Jackson. The dam would have reduced the stage of the Easter 1979 flood at Jackson by about 4 feet and would reduce average annual flood damages from Pearl River flooding by about 85 percent.

While flood control is the primary project purpose, there would be limited opportunities for recreation and fish and wildlife enhancement. There would be no permanent pool established.

Question. Would not a reservoir immediately upstream from the Ross Barnett Reservoir improve the operations of the Ross Barnett Reservoir, particularly with respect to ability of the spillway to handle discharges during peak flows? Have you analyzed these factors in evaluation of benefits for the dry reservoir?

Answer. A reservoir immediately upstream of Ross Barnett Reservoir would provide storage allowing Ross Barnett to better handle discharges during peak flows. The impact of the upstream project on Ross Barnett is currently being evaluated. Operation of the two projects in tandem would provide a very high degree of protection at Jackson. The exact degree of protection that would be provided is currently being evaluated.

Question. Would not such a project be more strategically located for flood control purposes and at the same time provide benefits for fish and wildlife and public recreation? Have your studies evaluated these potential benefits?

Answer. The dry dam and reservoir would require the purchase of only about 1,000 acres in fee, which would not allow the development and management necessary for any significant recreation or fish and wildlife benefits. Purchase of the entire reservoir area in fee was considered, in accordance with a plan developed by USFW, but evaluation of the plan shows no net benefits.

Question. It appears that there are some aspects of this potential project that need to be addressed further. Do you need some detailed information to prepare a report of survey scope on the Schoccoe dry dam concept? If so, how long would it take and what is your funding capability?

Answer. Yes sir; a report of survey scope would require further study. Engineering and planning efforts to take the Shoccoe Dam alternative through detailed evaluation are estimated to take 18 months and require $800,000. Our requirement in fiscal year 1983 to conduct these evaluations is $650,000. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

ALTERNATIVE TO EDINBURG LAKE

Question. Is it practical to pursue this project as an alternative under the Edinburg Lake authorization, and reduce the time required to realize an effective solution?

Answer. Yes, sir. Since the Edinburg Lake project was authorized for phase I planning, additional authorization will be required before construction of a project could be undertaken. The report seeking this additional authority could recommend construction of a project at the Shoccoe site rather than the Edinburg Lake project if it is determined that the Shoccoe Dam better meets current and foreseeable needs for water resource development in the Pearl River basin. However, based on information available at this time, both the Edinburg Lake project and the Shoccoe Dam lack economic feasibility.

STATEMENT BY SENATOR JOHNSTON

Chairman HATFIELD. At this time, I would like to insert a statement by Senator J. Bennett Johnston for the record.

[The statement and response follow:]

STATEMENT OF SENATOR JOHNSTON

Mr. Secretary, as you are aware, the private dredging industry was encouraged by the Congress 4 years ago to invest in a modern hopper dredging fleet. Since that time, private industry has responded by constructing eight technologically modern and efficient hopper dredges.

Recently, the Corps has furnished to me information which reflects that the private dredging industry has been successful in competing with the Government-owned dredging fleet for 90 percent of the yardage for which they were allowed to compete in fiscal year 1981.

House Report 95–378, dated June 2, 1977, reflects that the Corps of Engineers advised the Congress that the principal reliance for performance of Federal dredging should be on private industry, and further, that a healthy and profitable dredging industry was necessary to insure the economical and timely execution of the Nation's dredging program.

In spite of these comments, I am advised that the private dredging fleet is severely underutilized. If we were to more fully employ the industry capability, I believe we would be able either to reduce the current cost or increase the amount of dredging performed and also eliminate possible future capital expenditures for Federal dredges.

The Corps is responsible for maintaining a minimum Federal dredging fleet to meet emergency and national defense needs. I am advised that you are developing a program referred to as the Corps of Engineers reserve fleet (CERF) which utilizes industry's capabilities to assist in meeting that need. I wholeheartedly support this concept and I would urge you to expeditiously complete this study and provide to the committee your projected schedule as to when we can expect to receive the results of this study.

I am also advised that you are currently considering a program of reduced utilization of the more costly federally owned fleet in order to effect overall economies, as well as assisting you in meeting your manpower reductions. It is my understanding that one of the proposals would be to adopt a one-shift operation for Federal dredges and go to a cadre approach which would allow the Corps to rapidly expand their capability in the event of an emergency or for national defense purposes. This appears to be a very rational and productive approach which would provide for a significant cost savings, more fully utilize the private capability and yet still be able to meet our emergency and national defense needs, and I applaud you for this innovative approach. I would appreciate your providing to the committee as soon as possible the results of this study and in the interim to provide to us your timetable for this action.

I want to add that the Corps should be commended for these two new approaches to our country's dredging needs. In times of severe reductions in Federal expenditures, it is encouraging to note that you are searching for new methods to keep our ports and waterways fully operational and I would encourage you to make every effort to expedite both these programs to the fullest.

CORPS RESPONSE TO SENATOR JOHNSTON'S STATEMENT

The Corps of Engineers recently established a group to evaluate the feasibility of utilizing industry dredges on a reserve fleet basis. Brigadier General Gay, the Deputy Director of Civil Works, is the Chairman of this group (Corps of Engineers Reserve Fleet Board, CERF). The CERF Board has met with representatives of the Air Force that manage the Civil Reserve Air Fleet program and with Navy representatives that manage the Military Sealift Command reserve fleet activities. These meetings were arranged in order to determine whether the management and contractual procedures utilized in these programs can be applied to the Corps of Engineers dredging program. Representatives of the dredging industry have been invited to the two meetings which have been held and will be invited to attend all future meetings. We have assigned a high priority to this program in order to arrive at a determination of the feasibility of utilizing industry dredges as part of the minimum fleet to respond to emergency and defense requirements in the U. S. and overseas. In addition to the contractual provisions and payments clauses that must be developed,it will be necessary to evaluate the suitability of the industry dredges to meet the emergency and defense missions cited in Public Law 95-269. While the CERF Board has only been in existence for a short time, it would appear that the usage of industry dredges on a reserve fleet basis to meet domestic emergency needs and even defense needs in the U. S. would not pose any undue operational problems.

It is the utilization of industry equipment in hostile and combat situations that will require careful evaluation. Understandably, industry dredges are designed to meet commercial needs and to operate on a competitive basis. For example, the quarters accommodations on industry dredges are adequate to house only one crew at a time. This arrangement is fine when the rotational crew can arrive at the dredge from a nearby location. However, this arrangement is not suitable when dredges are operating for extended periods in remote areas. This situation is made worse when hostile or combat conditions exist. In World War II, Korea, and Vietnam, Corps dredges were utilized for extended periods in remote combat areas. In Vietnam, Corps dredges were on long-term assignments, the longest was six years, and were subjected to combat damage and loss of life.

Another important factor that must be considered is the hull strength and hull characteristics of the industry vessels. The large majority of industry hopper dredges have the split-hull design. Split-hull vessels have two longitudinal hull sections. These vessels are designed so that the two hull sections part in the middle along the entire length of the vessels. The vessels open up automatically when mechanical locks or dogs are released. However, to close the vessels, hydraulic cylinders and rams must be used. If these cylinders and rams are damaged, it is necessary to go to a shipyard to repair them. During the transit voyage, the vessel must remain in an open position which makes the transit speed slow and dangerous when heavy seas and waves exist. I mention these factors to emphasize that there are some aspects that must be evaluated before a determination can be made as to the extent that a reserve fleet concept can be used to partially fulfill the emergency and defense missions included in Public Law 96-269. However, I want to make it clear that it is our intention to fully consider the optimum use of the reserve fleet concept. The evaluation of the reserve fleet concept was initiated only a short time ago, so it is difficult to forecast when our study will be completed; but I would think that we should have a more complete evaluation of the concept by the end of this fiscal year.

We are also considering reducing the operational schedules for Corps dredges. Generally speaking, we have operated our dredges for many years on an 11-month schedule, on a 24 hours per day, 7 days per week basis. This schedule was a necessity, as the size of the Corps hopper dredge fleet was reduced from 27 vessels during the World War II period to lesser numbers, while the workload stayed the same and in some cases increased. With the availability of industry hopper dredges, which did not exist until 1977, we have been planning to return to the 24 hours per day, 5 days per week schedule which we used some years ago. The one shift per day (8 hours) schedule was suggested by various representatives of the dredging industry. We do not feel this type of schedule provides for a reasonable utilization rate of public equipment nor prudent use of public funds, nor will it provide for Corps crews that are capable of responding immediately to defense needs in remote and overseas areas. Actually, there is some increase in the daily operational cost based on a 24 hours per day, 5 days per week schedule. However, the cost increase factor is counterbalanced, to some degree, in that the Corps crews can be utilized for on-board repairs and maintenance instead of relying totally on shipyard support.

In both instances, the reserve fleet concept and the change in operational schedules, we are making every reasonable effort to implement these programs as soon as possible. However, we are still a long way from developing a plan to finance the CERF concept, since funding defense needs through the Civil Works budget process does not appear to be appropriate.

STATEMENT OF SENATOR THAD COCHRAN

Chairman HATFIELD. Senator Cochran has also submitted a statement for the record that, without objection, will be inserted at this point.

[The statement follows:]

STATEMENT OF SENATOR THAD COCHRAN

Mr. Chairman, I appreciate this opportunity to express my views and concerns in regard to the fiscal year 1983 budget for civil works.

I am certain that we all realize the difficulties that we must overcome to bring about a return to fiscal responsibility. If we are to reach our goal, some difficult decisions must be reached in this budget process. The President has put a real challenge before this committee. But, only this committee can decide whether to rubber stamp the proposal and the assumptions that underly it or to operate from other assumptions to accomplish this reduction in outlays.

In regard to the President's proposal, I am pleased that he has continued to support the orderly construction of the Tennessee-Tombigbee waterway project. As this project nears completion, it is vital that we provide the necessary funding to keep construction on schedule. Its completion in 1986 will provide an important addition to the efficient operation of our inland waterways system.

Flood control is of paramount importance to Mississippi and the other States bordering on the Mississippi River. I am pleased that the President's budget recommends an increase in funding for the Mississippi River and tributaries project of approximately $25 million to provide a total of $282 million for fiscal year 1983.

Although the proposed budget proposes a reduction of approximately $200 million for the construction general account, I believe this may be fairly attributed to the long delays caused by congressional inaction on the authorization of new projects. I am hopeful that this problem can be resolved in the near future.

An area of particular concern to my State is the budget proposal to reduce funding for critical operation and maintenance on our inland waterways, shallow draft harbors, and commercial ports. The reduction of $150 million in this account will have serious impact on the ports of Rosedale and Gulfport in Mississippi. I am particularly concerned that this reduction is based on the assumption that Congress will enact the user fee legislation that has been pending before us for some time. I would urge that the committee not base its funding decisions of operation and maintenance on this assumption. In the absence of user fee enactment, I would hope that this committee will recognize the need to provide the appropriations for these projects.

QUESTIONS SUBMITTED FOR THE RECORD

Chairman HATFIELD. We have also received questions from Senators Abdnor, Huddleston, Chiles, Stevens, Jackson, and Gorton, and Senator Pryor. Those will be made part of the record at this point for your response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR ABDNOR

STREAMBANK EROSION CONTROL DEMONSTRATION PROGRAM

Question. The Corps has notified local sponsors of streambank stabilization projects constructed under the section 32 program that they must assume, at the end of this fiscal year, the responsibility for maintaining these projects. While the authority for new construction under the program does expire this year, it is my understanding local sponsors were assured that the Corps would oversee and maintain the sites for a period of 5 years, until they have proven stable. Do you anticipate that sites stabilized under the program will require much maintenance in the next 5 years? If not, what is the urgency in terms of budgetary impact in turning them over to local sponsors? If so, is it fair to shift to local sponsors the cost of trying to maintain stabilization sites designed to demonstrate the effectiveness of new techniques, techniques which will have proven to be ineffective if significant maintenance costs are incurred?

Answer. I am unaware that local sponsors were assured that the Corps would maintain the sites for a period of 5 years. The amount of maintenance required over the next 5 years at numerous demonstration projects constructed nationwide is difficult to project. However, stabilized projects should experience minor maintenance efforts. Simple groundkeeping and replacement of minimally disturbed materials should suffice. The urgency in transferring the demonstration projects to the local sponsors relates to the authorizing document. We are required to submit a final report to the Congress as of December 31, 1981. This completion date limits our work. We have instructed our field operating agencies to turn over the demonstration projects as soon as possible after a final inspection is made by the local sponsor and the Corps. Every attempt will be made to have a sound and functional project using available funds.

We have turned over several demonstration projects to the sponsoring agencies. One sample letter of agreement from the local sponsor reinforces your views on fairness of shifting responsibility. This sponsor has agreed to accept the project, but will not be held responsible for extensive maintenance resulting from the failure of new, unproven methods of streambank erosion control.

Question. Can local sponsors afford substantial costs in maintaining section 32 sites, or is it not likely, in the event of significant maintenance costs, that the Federal investment in any site which has not been effectively stabilized will simply be lost? I have a particular interest in the White Swan site on the Missouri River near Wagner, S. Dak.

Answer. The authorizing document stated that the Chief of Engineers is authorized to conduct a national streambank erosion prevention and demonstration program for a period of 5 years and shall make a final report to Congress no later than December 31, 1981. Since the time limit has not been extended, the program is being terminated. All projects are being turned over to local sponsors for operation and maintenance in accordance with respective sponsorship agreements. The local agreement for the White Swan site does not specify any period of time for which the Federal Government will maintain the project, but does state the project will not be transferred to the Charles Mix Conservation District, the local sponsor for the White Swan demonstration project, unless or until proven to provide sound and functional erosion control. An early spring inspection trip will be made to the White Swan project to evaluate the structures.

The financial capability of each local sponsor to maintain demonstration projects is highly variable. Similarly, the amount of money needed for maintenance is subject to many factors. Because of the number of unknowns, I concur that significant maintenance costs could preclude the rehabilitation at selected demonstration projects. The Federal investment will be lost at these locations, but these projects were developed as demonstration sites and some lessons will have been learned.

QUESTIONS SUBMITTED BY SENATOR HUDDLESTON

PINEVILLE FLOODWALL

Question. Would you confirm that the capability statement provided to the Congress last year clearly indicated the initiation of construction of the Pineville, Ky., floodwall as a priority item? The Congress provided funding with that expectation.

Answer. I did not see, much less approve, any proposed statement of capability for this project. The division and district engineers of the Army Corps of Engineers are not in a position to formulate realistic capabilities because they do not have available information relating to overall budget constraints and manpower levels. Nonetheless, the record of hearings held on February 5, 1981, before the subcommittee on the fiscal year 1982 civil works budget indicates on page 315 of part 1 that, in response to questions submitted by Senator Huddleston, a capability to use $7.5 million was provided by the Ohio River Division Engineer, Brig. Gen. Kem, an amount which included funds to initiate work at Pineville, Ky., in July 1982. However, the fact that funding for this project was not included in the President's budget revisions submitted to Congress a month later on March 10, 1981, suggests that it was not a priority project within the funds allocated to the civil works program.

Question. It seems to me there is a blatant disregard of congressional intent if the Corps prohibits initiation of construction at Pineville in this fiscal year. The Commonwealth of Kentucky has entered into a cooperative effort on this project and has already committed $10 million of State highway funds (or almost 20 percent of the total project cost) for the joint highway/floodwall at Pineville. I understand that other local government activities are adversely impacted by this delay. Please report to the committee on such impacts including the impact on the Pineville High School.

Answer. The city of Pineville awarded a contract in December 1981 to construct a high school facility at an estimated cost of $750,000 within the area to be protected by the Pineville segment of the overall section 202 project. The high school is about 10 percent complete with completion scheduled for August 1982. Since the existing floodwall only affords an effective 40-year level of protection, FEMA regulations would require the first-floor elevation of the new school to be above the 100-year flood elevation. In this case, the school building's first floor would have to be built about 15 to 18 feet above ground elevation to meet that requirement, at an additional cost of about $175,000. Due to the impending development of the new flood protection project, the city secured a waiver from FEMA in April 1981 for the new building, which means the new facility is not covered under the flood insurance program. Delays in construction of the new floodwall would increase the length of time that the new school is risking exposure to potential flooding without insurance coverage. However, the floodwall project would require about 2 years to complete and the high school would continue to be subject to flooding during the construction period. If the existing floodwall is overtopped again, the resulting damage could impose a considerable financial impact to the city. Also, other development by local interests on lands inside the existing floodwall would be subject to FEMA regulations if the section 202 project is not constructed.

Question. You have stated that, "No Corps of Engineers report on this project demonstrates its feasibility." Are you aware the Nashville district completed the upper Cumberland River basin (UCRB) stage 2 intermediate level report in 1979, which demonstrates feasibility of flood protection projects at Pineville, Barbourville, and marginal feasibility at several other UCRB communities? The Nashville district has demonstrated that the projects proposed for Pineville and Barbourville are engineeringly sound and economically viable and ORD/OCE has concurred that the proposed designs are proper and effective.

Answer. When I referred to "this project," I had in mind the full plan of construction works implicit in the $702 million cost estimate. No such report has been prepared. Moreover, the reports addressing individual project elements have not been presented to me for review in connection with my formulation of the civil works budget.

Question. You have stated that you are not so concerned with specific project details at particular locations, but rather with the planning concepts considered by the Corps? The Nashville district has considered alternative structures for Pineville and Barbourville and in their evaluation was sensitive to project desirability from an esthetic standpoint. The public has been given many opportunities to review the proposed plans and to offer their reactions. They will continue to be given this opportunity. Since July 1981, one public hearing and six public briefings have been conducted at Pineville, as well as numerous coordination and review meetings with local officials at Pineville. The public has reacted favorably to the projects and local officials endorse the plans at both Pineville and Barbourville.

The physical setting of the city of Pineville, Ky., lends itself to catastrophic consequences during large floods. The central business district and about 75 percent of the residential area of Wallsend and Pineville are virtually locked between the levee/floodwall and practically vertical mountains. Once the floodgates are closed, direct escape is not possible, since water surrounds Pineville on all sides.

The major evacuation route is up Pine Mountain, around a narrow road, over which vehicular traffic cannot pass. Chances for tremendous loss of life due to failure of any relatively low-level levee/floodwall system are much greater than most other leveed areas because of the population concentration and great depth of flooding. A level of protection commensurate with the standard project flood is an absolute necessity.

Do you intend to apply your so-called innovative financing approach to the section 202 project? Under what authority?

Answer. The innovative financing which I have proposed is for fiscal year 1983 construction new starts. The administration's policy for financing and cost sharing beyond 1983 has not been established.

OPERATION AND MAINTENANCE—USER FEE PROPOSAL

Question. In arriving at your decision not to request funds for O. & M. projects, what was the criteria for this decision?

Answer. As construction reaches completion on additional Corps projects each year, the requirement for operation and maintenance has raised dramatically. In an effort to reduce outlays for O. & M. and, consistent with the administration's philosophy that project beneficiaries share in the cost of the benefits they receive, we have proposed a reduction in funding for some of the lower use or less efficient waterway projects. Accordingly, we are proposing reduced dredging funds from shallow-draft harbors with project depths of 14 feet or less; reduced hours of lock operation on moderate use waterways where the average annual commodity flow is 5 to 30 million tons; closing locks and deferring maintenance on waterways with less than 5 million tons of commercial traffic annually; and deferring maintenance activities on deep-draft harbors where maintenance costs are over $1 per ton of annual seagoing commerce. The administration is committed to requesting additional fiscal 1983 appropriation for these projects when adequate reimbursement for navigation costs through user fees is authorized.

Question. Have you even considered or studied the economic and social impacts of your budget recommendation on curtailing services and/or closing navigation facilities? If so, I would like the reports on the Ohio, Cumberland, Tennessee, and Kentucky Rivers and on the Hickman, Ky., Harbor.

Answer. Our original list of reductions was prepared without attempting to analyze impacts on specific projects. We are now reviewing the overall proposed reductions with a view toward allowing service to continue at those projects where a curtailment would seriously affect the economic well-being of a community or region. Our review will include the projects that you have indicated and we will furnish a report on the various impacts imposed by any of the proposed reductions.

Question. Have you received assurances from the States that they will participate in cost sharing for preparation of planning reports for water resource projects? Seven States border Kentucky; some water projects affect several States. In the case of a project being physically in one State and providing protection in another, how would you apportion costs?

It seems to me that your innovative financing is merely this administration's thinly veiled excuse for hit list operations.

Answer. We have not asked for assurances from local interests or States concerning their willingness to share the costs of Corps planning studies. With regard to studies for projects physically located in one State but benefiting the people of another, I would like the benefiting State or States to share in the study costs as well as the future project costs.

NAVIGATION SYSTEM IMPROVEMENTS, OHIO RIVER

Question. I am also concerned about the navigation improvements on the Ohio River downstream from Smithland Dam. Locks and dam 52 and 53 were completed in the 1928–29 period and additional temporary 1,200-foot locks have been added at each of these structures. It is my understanding that these temporary structures employed an austere sheet-pile cell wall design and were not intended for long-term use. Please comment on this situation and whether the Corps has reported to the authorizing committees about the seriousness of this problem? Has all the necessary study, engineering, and design work been completed? If not, please advise the committee about the remaining work. Has the Corps paid the final settlement of contractor's claim on the temporary lock contract at locks and dam 53?

Answer. Temporary 110- by 1,200-foot locks were completed at locks and dam 52 and locks and dam 53 in 1969 and 1980, respectively. The expected life of these structures is about 20 years, although this could be extended through intensive maintenance and repair effort. Studies funded under the "Operation and maintenance, general" appropriation, are now underway concerning improvements needed to maintain the present projects at locks and dams 52 and 53 and other alternatives such as open river canalization and high-lift replacement options. A preliminary draft report and environmental impact statement have recently been reviewed by the Ohio River Division. The district engineer's final report is scheduled for completion early in fiscal year 1983. The Corps has not yet paid the final settlement of the contractor's claim on the temporary lock contract at locks and dam 53 because the transfer of funds to this project that is required to pay the settlement exceeds the transfer authority that the Appropriations Committees have delegated to the Chief of Engineers. However, on March 17, 1982, Maj. Gen. Heiberg sent letters to Senator Hatfield and Mr. Bevill informing them of a proposal to transfer $1,355,000 to the locks and dam 53 project to pay the contractor's claim. Upon notification that the committees do not object to this proposal, the funds will be transferred and the contractor will be paid.

DAYTON FLOODWALL

Question. Will the fiscal year 1982 appropriation complete the Dayton, Ky., floodwall project? When will it be fully operable for flood protection?

Answer. The fiscal year 1982 appropriation will complete the Dayton project. It has been operable for flood protection since the 1981 spring flood season. Final work on all flood protection features of the project are scheduled for completion bty the end of fiscal year 1982.

CARR FORK LAKE

Question. I understand that possible deficiency judgments on outstanding real estate condemnations for the Carr Fork Lake, Ky., project may require additional funds. Do you expect these judgments soon?

Answer. Additional funding may be required for the Carr Fork Lake project due to possible deficiency judgments. However, we do not know when these judgments will be made. The need for additional funds cannot be determined until the outcome of the real estate condemnation trial is known.

YATESVILLE LAKE

Question. Do you have a capability for work on the Yatesville Lake, Ky., project?

Answer. The capability for the Yatesville Lake project is under review. The administration's position is that further funds should not be expended for construction and an attempt should be made to reformulate this project so that it will provide a higher degree of flood protection or possibly include other purposes in which local interests can jointly participate.

SALYERSVILLE LOCAL PROTECTION PROJECT

Question. A flood control study was authorized in 1977 but there are no funds in the fiscal year 1983 budget. Would you please provide a capability and report on the heavy damages which have occurred in this Appalachian town in the last 5 years?

Answer. Subject to the qualifying language, we could use $150,000 in fiscal year 1983 on this study. From 1977 through March 1982, covering the last 5 years, about $2.6 million in flood damage has been experienced along the main stem of Licking River in Magoffin County, Ky. Most of that damage was in Salyersville. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

SOUTH FRANKFORT FLOODWALL

Question. Do you have an additional capability for the South Frankfort, Ky., floodwall?

Answer. Included in the fiscal year 1983 budget is $92,000 for advance engineering and design for the South Frankfort section of the Frankfort, Ky., project. Subject to the capability language being used for the fiscal year 1983 budget, the capability for this project is $380,000. The capability amount will advance completion of preconstruction planning by 15 months to September 1983. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. Historically, the Corps has exhibited flexibility to accommodate congressional add-ons. Have you initiated changes that would eliminate this flexibility? By what authority can you—without congressional authorization and approval—change this policy?

Answer. Flexibility to accommodate congressional add-ons—this characteristic of the civil works program depends upon the exigencies of the budget circumstances in which the Nation finds itself. It is, as a practical matter, a characteristic which admits of a range of interpretation. Thus, when one talks about accommodating an open-ended commitment which today is estimated at $702 million—and I have no confidence that this will not increase further—flexibility of this magnitude merits concern on the part of Congress and the administration.

Question. In reviewing budget submissions, I see that the Bureau of Outdoor Recreation request is about $922 million for fiscal year 1983, which is about $100 million more than the fiscal year 1982 request. I note that for the Corps of Engineers, the budget request for fiscal year 1983 is $2.2 billion, which is $800 million less than fiscal year 1982. Would you care to explain this adminstration's water policy?

Answer. Budget recommendations for the Corps of Engineers, as is true of recommendations for other Federal water project construction agencies, reflect the status of ongoing projects. They also reflect the limited number of construction new starts initiated in recent years. And it is to remedy the lack of new starts in recent years that a major aspect of the administration's water policy is addressed. Our hope is that through the innovative financing proposals which we have been pursuing with non-Federal sponsors that we will be able to submit to Congress for review and approval a program of new construction starts for the Corps in fiscal year 1983. At any rate, however, there is not necessarily a relationship between water policy and amount of funds included in a particular agency's budget in a particular year.

Questions Submitted by Senator Chiles

AQUATIC PLANT CONTROL PROGRAM

Question. In 1965 Congress authorized a comprehensive aquatic plant control program to control noxious weeks in navigable waters. Generally, how effective is the Corps in carrying out its responsibilities under this program?

Answer. Generally, the Corps has been very effective in carrying out its responsibilities under the aquatic plant control program. We have made significant strides in aquatic plant research in the areas of biologic, chemical, and mechanical methods of control. We're also gaining a better understanding of the ecology of problem aquatic plants and of the successional changes related to their control. The cost-sharing control program with various States has been effective in controlling species such as alligator weed, water hyacinth, hydrilla, and Eurasian watermilfoil.

Question. What is the Corps' national capability with respect to the aquatic plant control program?

Answer. The aquatic plant control program must adhere to a current authorization of $5 million. The budget request for fiscal year 1983 is $4.5 million. Consequently, we have additional program capability of $500,000, subject to the qualifying language.

Question. How extensive is the participation in the cost-sharing program? Could you provide a breakdown of the State allocations of the fiscal year 1982 funding?

Answer. The Corps has developed aquatic plant control cost-sharing contracts or has done planning leading to contracts in 16 States. Additional States, such as California, are now interested in participating in cooperative efforts to control newly developing problems. During fiscal year 1982, our efforts will be concentrated on 12 States as indicated below by the fiscal year 1982 aquatic plant control allocations:

Division	District	State	Operational and planning	Research all Federal
LMVD	New Orleans	Louisiana	$300,000	
NAD	New York	Vermont	102,000	
NCD	St. Paul	Minnesota	34,400	
NED	NED	Massachusetts	5,000	
NPD	Seattle	Washington	270,000	
NPD	Portland	Oregon	5,000	
SAD	Charleston	South Carolina	27,000	
SAD	Jacksonville	Florida	1,400,000	
		Puerto Rico	50,000	
SAD	Mobile	Alabama	20,400	
SAD	Savannah	Georgia	25,800	
SWD	Galveston	Texas	60,000	
WES				$1,330,000
Total			2,300,000	1,330,000
Sum total				3,630,000

Question. The 1965 legislation establishing the aquatic week control program limits the Corps' budget to $5 million annually. Given the present national capability and the serious problems posed by noxious weeks throughout the Southeast and some Eastern States, why hasn't the Corps requested up to the $5 million limit.

Answer. The Corps' aquatic plant control budget request each year is one relatively small part of the Corps' overall budget request. The Corps has not requested the full $5 million because other programs must also be supported at acceptable levels within our budget limitation and the priorities assigned to the aquatic plant control program have not permitted it to compete at its fully authorized level.

Question. I have been advised of situations in my State where once the weeds have been removed through control operations, the plants are replaced by indigenous weeks which subsequently have a critical effect on either navigation or flood control. I would appreciate your views concerning possible changes in the aquatic plant control program which would allow for the expansion of the program to include indigenous weeds where they restrict navigation or create potential flooding conditions.

Answer. In general, exotic plants present the most severe problems because of the absence of physical or biological factors which limit their growth and spread. In some cases, removal of these species may leave a niche which indigenous plants occupy and, thereby, become a problem. We are addressing this problem through the aquatic plant research program work unit on basic ecology, including successional changes of aquatic plants. Our operational program in Florida contains a component known as the minor plants program which deals with this type of situation. Approximately 9 percent of the Corps' fiscal year 1982 allocation for aquatic plant control operations in Florida is being used in this aspect of the program. If the aquatic plant control program should be expanded, the control of exotic species should continue to receive a higher priority than control of indigenous species.

QUESTIONS SUBMITTED BY SENATOR STEVENS

SMALL NAVIGATION PROJECTS

Question. What are the Corps' construction capabilities in Alaska for small navigation projects under section 107? What projects are planned for Alaska in fiscal year 1983?

Answer. The fiscal year 1983 capabilities for construction at Bethel, Seward, and Dillingham are under review pending determination of policy on upfront non-Federal financing and cost sharing.

RIVERS AND HARBORS

Question. What studies does the Corps of Engineers plan with the proposed money for rivers and harbors in fiscal year 1983 in Alaska?

Answer. Funds will be used to continue work on the statewide comprehensive water resources study which will include an assessment of needed improvements for inland navigation, flood damage reduction, hydropower development, water supply for domestic and agricultural use, erosion control, and fish and wildlife habitat. An interim study will continue on harbor and navigation improvement needs for the development of bottom fishing industry including engineering, economic, and environmental analyses. The southeast Alaska hydropower study will be completed.

ST. PAUL ISLAND HARBOR

Question. The draft harbor feasibility report was completed in April 1981. The public comment period was to end June 30, 1981. What is the status of the report?

Answer. The Alaska district has completed the final feasibility report. The Division Engineer's notice of study completion is scheduled for May 1982.

Question. What capability, if any, does the Corps have in fiscal year 1983 for this project?

Answer. We have no capability pending submission of the Division Engineer's report to the Board of Engineers for Rivers and Harbors and pending a comparison with other projects which compete for Federal funding.

KODIAK

Question. What is required to start construction of the small boat harbor in Dog Bay at Kodiak?

Answer. Continued planning will be required to bring the feasibility report up to date for the Kodiak Harbor. Followon engineering and design for construction will require authorization by the Congress and consideration for subsequent funding.

BETHEL

Question. What is the status of the environmental impact statement on the proposed bank stabilization project at Bethel?

Answer. The draft environmental impact statement completed the 45-day review period on June 30, 1981. Comments have been incorporated into the final environmental statement scheduled for Division Engineer's public notice in June 1982.

Question. Once the project outline is complete, what types of funding are available through the Corps of Engineers' budget?

Answer. The next step for the Bethel bank stabilization project is continuation of planning and engineering studies. Fiscal year 1983 funds for this activity have not been requested for the Bethel project.

Question. What is the status of the environmental impact statement and detailed project report on the Bethel small boat harbor project?

Answer. Both the environmental impact statement and detailed project report will be completed by the Alaska district in early June.

Question. Under what authority, if any, can the Corps of Engineers construct this boat harbor? Assuming there is authority, when would funds be available to start work?

Answer. Bethel Harbor is proceeding as a section 107 project. No funds are included in the fiscal year 1983 budget request for the construction of the Bethel Harbor project.

DILLINGHAM

Question. What was the outcome of the erosion problem reconnaissance study the Corps of Engineers conducted in 1981?

Answer. The reconnaissance study for the Dillingham erosion study recommended no further Federal involvement since economic evaluation showed a low benefit-to-cost ratio.

SOUTH-CENTRAL DEEP-DRAFT NAVIGATION

Question. What has been learned from this study so far?

Answer. The draft reconnaissance report for Kodiak indicates deep-draft navigation improvements for Kodiak are not economically justified and do not warrant Federal participation at this time. Benefits on the order of $1 million per year do not offset the high cost of a deepwater breakwater. If shipping loads increase, this situation may change. The Corps will continue to monitor this situation.

Question. What is going to be done with the $185,000 request by the administration in fiscal year 1983?

Answer. The Anchorage reconnaissance study will be completed with these funds.

SNETTISHAM HYDROELECTRIC PROJECT

Question. The Congress provided the Corps of Engineers with $2 million to continue construction of the Snettisham hydroelectric project in fiscal year 1982. What was done with this money?

Answer. These funds will be used to continue engineering and preparation of the plans and specifications for the access road, power tunnel, penstock, and powerhouse contract.

Question. Was all of it used?

Answer. The funds appropriated in fiscal year 1982 will be essentially used by the end of fiscal year 1982.

Question. Why was no further funding requested for fiscal year 1983?

Answer. This phase of the project is being considered for upfront financing by a local sponsor in accordance with the Department of the Army's policy on water resource projects.

Question. What is the Corps' fiscal year 1983 capability?

Answer. We have no capability pending determination of upfront non-Federal financing by local interests.

BRADLEY LAKE

Question. What is the status of the Bradley Lake hydroelectric project?

Answer. The general design memorandum is currently under review. Work on plans and specifications for the initial construction contract is scheduled to start in the spring of 1982.

Question. We understand the Corps and the State of Alaska have been discussing State funding of construction. What is the status of these talks?

Answer. The Corps has been working with the Alaska Power Authority (State) and the Alaska Power Administration (Federal) on a memorandum of understanding for the design, construction, and operation of the project. Briefly, the MOU states that the

Corps will design and construct the project with funds supplied by the Alaska Power Authority and operated by the Alaska Power Administration. The Alaska district is currently keeping abreast of two State legislative actions which relate to the project. The State must appropriate funds for the project and pass legislation enabling the State to contribute funds toward the construction of the Bradley Lake project without State ownership. The status of these actions cannot be determined, as the State legislature is still in session.

KETCHIKAN

Question. What is the status of the Mahoney Lake hydroelectric study?

Answer. Feasibility level geotechnical evaluations were completed in 1981 on the proposed Mahoney Lake hydroelectric project as were the environmental field investigations. Engineering and economic analysis will be completed in 1982 with the feasibility report scheduled for completion in November 1983.

404 WETLANDS REGULATORY PROGRAM

Question. What is the status of the Anchorage wetlands management plan?

Answer. The Anchorage wetlands management plan was approved in April 1982.

Question. What is the status of the proposed general permit for rural housing construction in Alaska?

Answer. Thirteen general permits are being reviewed for housing construction within the State's housing authority boundaries. Five of the general permits are in final process and could be issued during the spring of 1982.

CHENA RIVER LAKES, ALASKA

Question. The administration has requested in its fiscal yer 1983 budget request $11,300,000 for construction of the Chena River Lakes project. What will be done with the construction money?

Answer. The funds will be used to continue the levee protection contract and initiate four other construction contracts, two in association with the Moose Creek Dam and two on the levee.

Question. Does the Corps have additional capability?

Answer. Subject to the usual constraints, the Corps has an additional capability in fiscal year 1983 in the amount of $6 million. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. What are your plans for recreation facilities at the site?

Answer. Recreation facilities will consist of a swimming beach, trails, camping and picnic sites, a boat ramp, group picnic shelters, warmup and changing facilities, and associated roads and utilities.

Question. How well did the project work during the summer of 1981?

Answer. During the test filling in 1981 the project performed in an acceptable manner. However, as a result of this test filling, the need to perform some remedial work has been identified. During the fill the pool level reached about half the design water depth. Water pressure in the foundation, measured during this filling, was considerably higher than anticipated. This resulted in the formation of boils at several locations along the downstream toe of the dam, reducing the safety factor to about 1. To raise the pool to maximum design level could seriously impair the integrity of the dam.

The high water pressure in the foundation resulted from higher-than-anticipated permeability in several areas of the upstream silt blanket and inadequate drainage at the downstream toe. Immediate corrective measures are required prior to the next flood season. Observation of existing peizometers and the six existing relief wells made during the filling and examination of the upstream blanket following drawdown has provided data for design of corrective measures including extension of the upstream silt blanket and development of additional relief wells.

We also encountered some debris problems during the reservoir filling. The control works operated acceptably and provided regulation of flows downstream of the project; however, there was difficulty in lowering some of the gates to properly restrict flow in a uniform manner. Debris from upstream of the project jammed in the gates and prevented their smooth operation. The debris carried by the high waters from upstream caused a problem to the gates at the outlet works, the fish ladder, and the fishways. Based on the test filling, it is apparent that additional measures must be developed to handle the debris. The proposed remedial work includes seepage control measures, modifications to the trash control structure and trash gate slot, and other associated work and the upgrading of the abutments of the south seepage control weir and modifications to the weir.

Question. Are any changes planned as a result of last summer's experience?

Answer. Two contracts have been awarded for measures which will decrease and control the seepage through and under the dam. Debris-handling facilities and minor adjustments to the gates are presently being studied.

HOMER

Question. The city of Homer and State of Alaska are constructing a new small boat harbor at Homer. What is the status of the permits which the Corps of Engineers must issue for the project?

Answer. The Corps of Engineers, in cooperation with the city of Homer and the State of Alaska, plans to expand the harbor at Homer under the authority of section 107 of the 1960 River and Harbor Act, as amended. Corps permit activities are nearing completion, as well as harbor design. However, construction may be delayed until 1983 because of lack of funding by the State of Alaska.

PORT LIONS

Question. What is the status of the small boat harbor project at Port Lions? When will redesign of the project be completed and approved? How much of the reconstruction cost will the Corps of Engineers be able to bear under current authority?

Answer. The design report on the harbor repair project will be completed in June 1983. Plans and specifications will be completed in July 1983. The Corps will fund that work required to reconstruct the existing project. The modifications planned to the original design, such as lengthening the breakwater, will be funded in accordance with the rules of section 107. This means that a local sponsor will have to pay for those modifications because funds within the Federal limit of $2 million have nearly been expended.

OPERATION AND MAINTENANCE

HOMER, NINILCHIK, AND DILLINGHAM

Question. The Corps of Engineers in its proposed fiscal year 1983 budget has requested operation and maintenance funds only for the harbors of Nome and Anchorage. In fiscal year 1982 the Corps also maintained harbors at Homer, Ninilchik, and Dillingham. Why were these harbors not included for fiscal year 1983?

Answer. Without the enactment of cost recovery legislation for deep-draft and inland commercial navigation projects proposed by the administration and because of the Federal Government's inability to fund its entire historical workload, the fiscal outlook indicates that pressure on the budget will prevent the U.S. Army Corps of Engineers from financing some operation and maintenance projects and will require that funding of others be at a reduced level. Criteria used for determining the projects affected were:

Shallow-draft harbors.—Based on the national perspective and the Government's inability to fund lower priority work, no funds will be requested for operation and maintenance of shallow-draft harbors of 14 feet or less in depth.

Low-volume waterways.—Low-volume waterways carrying, in general, from zero to approximately 5 million tons per year of commerce will be closed and put in caretaker status.

Moderate-volume inland waterways.—Moderate-volume inland waterways where the annual commodity flow is 5 to 30 million tons per year will have reduced hours of operation.

Deep-draft harbors.—Deep-draft harbors over 14 feet in depth with historical average maintenance costs of over $1 per ton of seagoing commerce will not be maintained. The volume of commerce is based on the latest available published waterborne comerce and 5-year average annual maintenance cost.

Homer (which is a deep-draft harbor) and Dillingham and Ninilchik (shallow-draft harbors) meet the above criteria and, therefore, no funds have been requested for fiscal year 1983.

Question. What consideration did the Corps give to phasing out maintenance of these harbors rather than ending it with no notice?

Answer. Basically, there was no consideration given to phasing out the maintenance of those harbors affected by the reduction in navigation funds. Ample notice will be given to shippers on those projects that will be affected.

NOME AND ANCHORAGE

Question. Are there any plans to reduce the funds requested for operation and maintenance at Nome and Anchorage in fiscal year 1983?

Answer. Since the Nome and Anchorage Harbor projects do not meet the criteria, funds have been requested to maintain these harbors.

DRY PASS AND STIKINE RIVER

Question. Why were funds not included for operation and maintenance of Dry Pass and the Stikine Rivers?

Answer. Dry Pass River requires only periodic maintenance. It is anticipated that work will be performed utilizing fiscal year 1982 funds on Dry Pass and, therefore, no funds were requested for fiscal year 1983. Funding for the Stikine River project was not included in the fiscal year 1983 budget because the project met the shallow-draft harbor criteria.

TREATY AGREEMENTS

Question. Does the United States have any treaty requirements with Canada to maintain navigability of the Stikine River?

Answer. Article XXVI of the May 8, 1871, Treaty with Great Britain (17 Stat. 863; Treaty Series 133) requires that navigation of the Stikine River remain "free and open for the purposes of commerce." It does not specifically require that the river be snagged or dredged to maintain navigation.

QUESTIONS SUBMITTED BY SENATORS GORTON AND JACKSON

CHEHALIS RIVER AND TRIBUTARIES STUDY

Question. I understand the schedule for completing the interim Chehalis-Centralia flood damage reduction report, as part of the overall Chehalis River basin study, has slipped from September 1981 to November 1982. I also note the final basin report will now be completed in January 1985 instead of November 1983 reported last year. Could you please explain these changes and the status of any further evaluations?

Answer. Sir, the completion of the draft Chehalis-Centralia report/EIS was delayed by detailed studies of modification of Skookumchuck Dam for flood control. The project sponsor, the city of Centralia, requested this investigation following the July 1980 public workshop. The completion of the final basin report has been delayed because study manpower and funding has been concentrated on completion of the Chehalis-Centralia report and the Wynoochee hydropower/fish hatchery report.

Investigations of modifications at Skookumchuck Dam required more extensive hydrologic, hydraulic, and environmental studies than were originally estimated last year, primarily due to evaluation of the reliability of the water supply provided by the dam under both existing and modified conditions. Extensive coordination with the Pacific Power & Light Co. was required to reach agreement on a flood control guide curve for the reservoir.

Question. I see there has been a delay on the Wynoochee hydropower/fish hatchery report. Could you please explain?

Answer. Up to now, it appeared the Grays Harbor Public Utility District was willing and able to cooperate in the hydropower portion of the project. On February 22, the PUD advised the district engineer by letter that due to other financial obligtions they must withdraw their intent to cooperate in hydropower development at Wynoochee Dam. This change, of course, has resulted in a delay in completing the report.

Question. I understand that both the National Marine Fisheries Services and U.S. Fish and Wildlife Service have been asked to act as the Federal sponsor for the tentatively proposed fish hatchery at Wynoochee. What is the status of this coordination and has either agency expressed an intent to act as the sponsor?

Answer. We continue to coordinate with both agencies concerning Federal sponsorship of the fish hatchery. The Pacific Northwest regional director of NMFS has expressed his intent to be Federal sponsor, subject to specific authority and appropriation from Congress. The FWS has not replied to the Corps' request.

Question. What is the status of your basin flood reduction studies for the Aberdeen-Hoquiam area? Is there local support?

Answer. Work on the basin flood reduction study has been delayed due to concentration of funding and manpower under the Chehalis River and tributaries study authority to insure submission of both the Wynoochee and Centralia interim reports under current schedules and to avoid further delay in their submission. During fiscal year 1982, coordination with local interests will be continued and a plan of study prepared. There is local interest and support for resolving flood problems in the Aberdeen-Hoquiam area.

PUGET SOUND AND ADJACENT WATERS STUDY

Question. In the Puget Sound and adjacent waters study, I note that you are investigating flood damage reduction measures for the Snohomish River basin. Could you explain what measures may be recommended?

Answer. The draft feasibility report and environmental impact statement recommends a comprehensive basinwide flood damage reduction plan consisting of nine elements, the first two of which are recommended for Corps implementation by congressional authorization, with the remaining seven elements subject to implementation by existing authorities of Federal and non-Federal agencies. The recommended Federal plan elements requiring congressional authorization would involve riverbank excavation and channel widening near Snoqualmie, Wash., and second, a levee constructed along the Middle Ford Snoqualmie River near North Bend, Wash. Other elements not requiring congressional action include:

(1) A setback levee under section 205 authority along the Sultan River at Sultan; (2) floodproofing under section 205 authority of residential areas at Ebey Island, Diking District 13, Sultan, Carnation, and Three Rivers Trailer Park; (3) a coordinated levee system management plan for lower Snohomish River basin; (4) improved flood hazard information program; (5) improved flood warning system; (6) improved emergency evacuation plans; and (7) improved flood plain management.

GRAYS HARBOR, WASH.

Question. On Grays Harbor study, will the feasibility report be completed in November 1982 as indicated last year? If so, do you have capability to continue planning and engineering on any proposed navigation project improvement?

Answer. The feasibility study and report will be completed in November 1982 as planned. A capability for further study on this project will not be established until the Division Engineer issues his report.

SEATTLE HARBOR—DUWAMISH WATERWAY STUDY

Question. Could you describe your findings to date on the Seattle Harbor-Duwamish Waterway study?

Answer. The sponsor for the navigation study, Port of Seattle, has contributed $10 million to replace the Spokane Street Bridge. Replacement of this bridge with a higher level bridge is considered a necessary first step in obtaining navigation channel enlargement beyond the existing 34-foot project depth. The study is on schedule and the final report will be submitted by the North Pacific Division in January 1983.

As you may know, we are also investigating local flood damage reduction measures on the Duwamish River and Green River downstream from Howard Hanson Dam. This Federal dam is designed to control flood flows to 12,000 ft^3/s at Auburn; however, the Green River channel and existing levees are unable to carry this design flood plus additional local runoff. The flood damage reduction study and report will be completed in September 1983.

Columbia River at the Mouth Study

Question. What are your preliminary study findings for the Columbia River at the mouth study and what work is programed for fiscal year 1983?

Answer. Model tests by the waterways experiment station indicate that none of the plans involving jetty modification or channel realinement are cost effective. Therefore, dredging by itself is the only practical alternative for providing adequate entrance depths. Evaluation of preliminary design information, based on ship motion studies, indicates that an entrance channel depth of approximately 55 feet would provide design balance with the 40-foot-deep upriver channel. Calculations indicate that a 2,000-foot-wide channel would be adequate for 98 percent of all vessel crossings. The total first cost would be about $6.5 million.

We will complete coordination of the draft survey report and draft environmental impact statement with interested agencies and the public. Following that coordination, the final survey report and revised draft EIS will be completed and submitted by the Division Engineer in May 1983.

Cowlitz River and Tributaries Study

Question. I understand you wish to study long-range solutions to Cowlitz River problems brought about by the eruption of Mount St. Helens. What will be accomplished with your $250,000 budget request?

Answer. The study will be initiated, the problems experienced with existing projects as a result of the Mount St. Helens eruption will be defined; potential modifications of these projects to solve problems will be identified and evaluated; a determination will be made whether or not the study should proceed further, based on a preliminary appraisal of costs, benefits, and environmental impacts of potential solutions; a scope and cost estimate for detailed feasibility studies will be developed; and a reconnaissance report will be prepared. The reconnaissance study also should help sort out Federal and non-Federal responsibilities for water resource problems in the Cowlitz occasioned by the eruption of Mount St. Helens.

Question. The Cowlitz River study will likely be the first test of the administration's survey study cost-sharing proposal in the Northwest. How and when do you expect to approach potential sponsors regarding the cost-sharing agreement for detailed study? Who might be the potential sponsor and what would be their share of the study cost?

Answer. Studies of individual water projects should be conducted in two phases—a 100 percent federally financed first or reconnaissance phase and a cost-shared second or feasibility phase—this is the policy position set forth in the fiscal year 1983 civil works budget recommendations. However, it has not been determined that this policy position is appropriate to the situation in the proposed section 216 study of the Cowlitz River basin.

Question. I understand that detailed studies for the Cowlitz River could cost over $4 million. Please describe the major elements of the detailed study.

Answer. As indicated in response to a previous question, a determination will be made during the proposed $250,000 reconnaissance study whether or not a detailed feasibility study should proceed and what the scope and cost of such a study would be. The reconnaissance study might reasonably be expected to suggest how any future feasibility studies, if warranted, ought to be conducted; that is, development of a basin-wide plan or interim report addressing specific problem areas.

Mount St. Helens Emergency Work

Question. Would you outline your fiscal year 1982 and fiscal year 1983 emergency work program for the Toutle and Cowlitz Rivers?

Answer. All identified fiscal year 1982 emergency work has been funded. These actions include completion of pumping plants and levee protection for urban areas along the Cowlitz River; a monitoring and sediment analysis program; and continued dredging of the Columbia River sump at the mouth of the Cowlitz River. It is recognized that the emergency has passed but that a long-term threat does exist. No emergency funds are programed in fiscal year 1983; however, we are ready to respond under our existing authority should a life or property threatening emergency arise. There are currently $5.5 million in O. & M. funds in the fiscal year 1983 budget to accomplish increased Columbia River dredging.

Question. What is the current level of flood protection in the Cowlitz River area?

Answer. Flood protection to the urban areas along the lower Cowlitz River is in excess of 100 to 500 years.

Question. Without a dredging program in the Toutle and Cowlitz Rivers, it is apparent that the level of flood protection to the Cowlitz River area will drop as more material is deposited in the Cowlitz River. What will be the Cowlitz River area's flood protection level by the end of fiscal year 1983?

Answer. Based on our latest projections of sediment infill into the Cowlitz River under normal precipitation patterns through the remainder of this year and fiscal year 1983, we expect that the level of protection to the urban areas along the Cowlitz River would still remain in excess of 100 years.

Question. Would you discuss the fiscal year 1983 emergency work that would be required and the funds required to maintain the current 500-year protection to the people in the Cowlitz area?

Answer. Currently some urban areas along the Cowlitz River have flood protection in excess of 100 years but less than 500 years. We have no estimate on the actions required or related costs to restore the 500-year protection. If the 500-year level of protection existed, the Portland district has identified a plan of action for excavating sediment in the Toutle River and doing stabilization of existing disposal areas aimed at maintaining a 500-year level of protection. These actions, as well as related activities, are estimated to cost $27.5 million.

Question. What is your fiscal year 1983 capability for the Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg.?

Answer. The fiscal year 1983 capability for the Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg., project is $20,195,000. This amount is $7,150,000 above the budget requet and would be used to perform 4,500,000 cubic yards of dredging due to Mount St. Helens activity and to initiate and complete pile dike repairs. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. Do you have authority to use O. & M. funds for removal of material in the Toutle and Cowlitz River channel to reduce the maintenance dredging in the Columbia River main channel?

Answer. Authorized maintenance dredging for the Columbia River is generally limited to the specifically authorized channel dimension which would exclude any activity on either the Cowlitz or Toutle Rivers, However, the Corps does have authority to perform advance maintenance dredging immediately beyond the authorized channel prism if such maintenance is cost effective in terms of reducing dredging plant mobilization costs by reducing the return frequency. Under this scenerio, the Corps is able to perform maintenance dredging for the Columbia River by dredging immediately adjacent to the Columbia River channel in the mouth of the Cowlitz River where the Mount St. Helens material enters the Columbia River system.

CHIEF JOSEPH ADDITIONAL UNITS, WASHINGTON

Question. I note that the recreation development has been delayed. In fact, you now have placed this work in an indefinite status. What is the reason for this delay?

Answer. The reason for the delay is the stringency of the budgetary situation. Nationwide it would cost perhaps several hundred million dollars to construct, at 100 percent Federal expense, additional recreation facilities at ongoing construction projects. The O. & M. and manpower commitments, which such construction would place on Corps resources in the future, also are of concern. Accordingly, the fiscal year 1983 budget proposes cost sharing for recreation facilities on the same basis for projects authorized prior to 1965 as applies to projects authorized after 1965; namely, 50/50 with non-Federal interests bearing O. & M. costs. This should help the more needed recreation facilities to move forward and, at the same time, conserve scarce Federal budget resources.

Question. What is the status of the recreation development at this project?

Answer. The plan for recreation at the Chief Joseph additional units project consists primarily of developing the Bridgeport State Park site. Phase I site work has been completed. Fiscal year 1982 funds will be used to develop parking facilities, construct a beach, restrooms, and a boat-handling facility. In accordance with the policy presented with the fiscal year 1983 budget request, the remainder of recreation work at the Bridgeport State Park site cannot commence until local cost-sharing agreements are developed and executed.

Question. How far have you progressed in the development of cost-sharing agreements with local interests for this remaining recreation work?

Answer. To date, no contact has been made with local interests regarding cost sharing on the remaining recreation facilities.

MILL CREEK, WASH.

Question. What is the status of rehabilitation work on the Mill Creek Dam in Washington?

Answer. Work is more than 60 percent complete on the main dam and 7 percent complete on channel improvements.

Question. What is your fiscal year 1983 capability?

Answer. The fiscal year 1983 capability for this project is $4.3 million. This amount is $900,000 above the budget request. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. If capability funds are provided, what would this capability accomplish?

Answer. The scheduled completion date would be advanced from September 1985 to September 1984, but note the reservations regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

MCNARY SECOND POWERHOUSE, OREGON AND WASHINGTON

Question. What is the status of preconstruction planning?

Answer. Work is progressing on this planning and engineering study on schedule. Fiscal year 1982 funds are being used to initiate phase II design studies, refine the plan of improvement, and project cost estimates.

Question. What is your fiscal year 1983 capability?

Answer. The fiscal year 1983 capability is $2 million. This amount is $200,000 above the budget request and would advance completion of the study by 3 months to September 1983. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. What is the earliest date that you could bring these units on line?

Answer. Assuming the project is authorized and funded for construction in fiscal year 1984, the power-on-line date for the first unit would be August 1989.

Question. When will you need to have construction authority to meet this schedule?

Answer. In order to initiate construction in fiscal year 1984, construction authority would have to be provided during calendar year 1982.

GRAYS HARBOR AND CHEHALIS RIVER, WASH.

Question. The fiscal year 1983 O. & M. budget does not include funds for the Grays Harbor and Chehalis River project, Washington. What is the reason for the elimination of this vital project from the Corps program?

Answer. The fiscal year 1983 budget for operation and maintenance of navigation projects has been reduced by $150 million based on criteria developed to identify projects with the lowest national priority. Consistent with the President's budget proposal, Corps of Engineers will have to restrict its maintenance to the highest priority options. An initial evaluation identified the Grays Harbor and Chehalis River project as a high-cost commercial harbor; therefore, maintenance funds were not included in the fiscal year 1983 budget. The Corps is reassessing the fiscal year 1983 budget as it relates to the $150 million reduction and there may be some changes in the projects affected.

Question. What would be the impact to the Grays Harbor area if O. & M. funds are not resolved?

Answer. By 1984, deep-draft shipping in the project would be reduced 50 percent. The commerce lost is valued at $22.5 million. The project would be closed to all shipping resulting in severe local economic impacts. Twenty percent of the area's employment is dependent on shipping.

Question. What is your fiscal year 1983 capability?

Answer. With the usual qualification, the fiscal year 1983 capability amount is $3,575,000. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

LAKE WASHINGTON SHIP CANAL

Question. The fiscal year 1983 O. & M. budget request includes $396,000 for this project, or some $2.3 million below the fiscal year 1982 program level. The O. & M. justification of estimate sheet reports that the lock is to be placed in a caretaker status of fiscal year 1983. What is the impact of the closing of the navigation facilities at this project?

Answer. Closure of the lock would cause more than 2 million tons/year of commerce to be shipped via other modes of transportation. U.S. Coast Guard vessels could not move between Lake Washington and Puget Sound. Also, 7,000 recreational craft per year could not move between those two bodies of water.

Question. What is your fiscal year 1983 capability?

Answer. With the usual qualifications, the fiscal year 1983 capability amount is $2,313,000. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

O. & M. REDUCTIONS AND ELIMINATIONS

Question. In addition to the Grays Harbor and Lake Washington ship canal projects, there were other projects in the State of Washington that were not included in the fiscal year 1983 O. & M. budget request. Would you provide a listing of these projects that have been eliminated from your program, their capabilities, and impacts if funding is not restored?

Answer. The affected projects are listed below, along with impacts of not funding them in fiscal year 1983 and the fiscal year 1983 capability amounts, which are given with the usual qualifications. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Columbia River at Baker Bay.—By 1984, movement of some vessels will be limited to periods of high tide. By 1985, the channel would be closed, excluding all vessel movements. Commercial fishing boats would be forced to other parts or go out of business. A total of 800 vessels would be impacted. It is estimated that 60 percent of the local workforce would be affected. The fiscal 1983 capability amount is $206,000.

Columbia River between Chinok and Sand Island.—By 1984, shoaling within the authorized channel would restrict some commercial vessels to periods of high tide. By 1985, all vessels would be restricted to period of high tides. It is anticipated that by 1986 all vessels would be forced to move to other ports. This would directly impact about 50 percent of the local workforce. The fiscal year 1983 capability amount is $661,000.

Lake River.—This project is maintained only periodically. By 1985, because of shoaling, the log rafts will only be able to move during high river stages. Within 2 years, it is anticipated that logs would have to be moved by truck, thereby increasing transportation cost (22,000 tons per year). The fiscal year 1983 capability amount is $36,000.

Quillayute River.—Users would not be provided with information concerning channel conditions in fiscal year 1983. In fiscal year 1984, project channel would shoal, closing the boat basin and preventing U.S. Coast Guard search and rescue missions. The fiscal year 1983 capability amount is $4,750,000.

Skamokawa Creek.—The project is maintained periodically. It is estimated that within 2 to 3 years the project would shoal to a point which would limit use of the river by four gillnetters. Also, public boat ramp used to launch recreational boats would be impacted. The fiscal year 1983 capability amount is $41,000.

Swinomish Channel.—Users not provided with information as to channel conditions in fiscal year 1983. In fiscal year 1984, project would shoal to a point which would severely limit waterborne commerce as well as commercial fishing. Project would be closed to commercial operation in fiscal year 1985 affecting about 900,000 tons per year. The fiscal year 1983 capability amount is $290,000.

QUILLAYUTE RIVER, WASH.

Question. This project was severely damaged during recent storms. What is the current status of this project?

Answer. Storms in November 1981 caused a breach in the spit which protects the navigation channel and the boat basin. The breach threatens damage to boat basin facilities. The local project sponsor, the Port of Port Angeles, has advised boat basin tenants that protected moorage cannot be guaranteed until repairs to the spit are made. The Corps' North Pacific Division has submitted to the Office of the Chief of Engineers a recommendation for repair of the spit. That recommendation has been approved.

Question. What work do you plan on doing during fiscal year 1982?

Answer. The fiscal year 1982 budget contained no funds for maintenance of the Quillayute River project. The favorable review of the North Pacific Division's recommendation for repair of the spit will result in that work being performed in fiscal year 1982. The estimated cost of that work is $2.9 million.

Question. What is your fiscal year 1983 capability?

Answer. With the usual qualifications, fiscal year 1983 capability amount for the Quillayute River project is $4,750,000. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

Question. What do you propose to do in fiscal year 1983 with your capability?

Answer. The additional capability is for hydrographic surveys, dredging of the navigation channel, and repairs to the protective spit.

BONNEVILLE NAVIGATION LOCK, OREGON AND WASHINGTON

Question. What is your fiscal year 1983 capability?

Answer. The fiscal year 1983 capability for the Bonneville navigation lock planning and engineering study is $3.5 million. This amount is $1,878,000 above the budget request. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

FRIDAY HARBOR, WASH.

Question. Please tell us the status of the Friday Harbor small boat harbor project which is being considered under the continuing authority program.

Answer. The Friday Harbor small boat harbor project was approved for construction on July 9, 1981. The plans and specifications are being prepared and should be complete by May 1982.

EAST BAY SMALL BOAT HARBOR, WASH.

Question. On the East Bay small harbor project, funds in the amount of $800,000 were included in the fiscal year 1982 appropriation for the project. What is the current status of the construction of this project?

Answer. At present, the dredging portion of the project is underway and is scheduled for completion in May 1982.

Question. When do you expect to complete construction?

Answer. Construction is scheduled for completion in March 1983.

Question. What is your fiscal year 1983 capability?

Answer. We have $296,000 programed for the project in fiscal year 1983.

Question. Will this complete the project?

Answer. Yes; this will complete the project.

Question. Please provide a listing of all the small projects in the State of Washington, either under study or under construction. Also provide the current status and your fiscal year 1983 capability and what it would be used for.

Answer. The information follows:

Project Name	Current Status	Proposed FY 1983 Plan * Funds	Proposed FY 1983 Plan * Purpose
Navigation			
Camas-Washougal Channel	DPR Underway	$250,000	Complete Construction
Chinook SBB	Recon Complete	97,000	Start & Complete DPR
Skamokwa Channel	Recon Complete	85,000	Start & Complete DPR
Ilwaco Channel	DPR Underway	50,000	Start & Complete P&S
Wind River Channel	DPR Underway	20,000	Start & Complete P&S
East Bay SBB	Under Construction	296,000	Complete Construction
Friday Harbor SBH	P&S Underway	0	
Gooseberry Point	Recon Complete	0	
Sandy Point	Recon Underway	0	
Flood Control			
Dosewallips River, Brinnon	DPR Underway	200,000	Continue DPR
Bowman Hilton-River Park	DPR Underway	50,000 20,000	Complete DPR Start P&S
Skagit River, Hamilton	Recon Underway	0	
Sultan	DPR Underway	79,000 10,000	Complete DPR Start P&S
Emergency Streambank & Shoreline Protection			
Tilton River STP	Recon Approved	0	
Yakima River, Yakima	Recon Complete	0	
Salmon River near Vancouver	Recon Underway	0	
Cape Horn Road, Hamilton	Recon Underway	0	
Hoh River	Recon Underway	0	

*Based on FY 1983 Budget Request

For the Small Project Programs, due to their dynamics, only a Program capability without respect to specific projects is developed. The Fiscal Year 1983 capability for each of the six Programs is under review pending, among other things, development of an appropriate upfront financing policy for their construction and this policy's application to specific projects. Until this action is completed no plan for distribution of additional funds to individual projects can be developed. There is an awareness that some of the studies and projects in the State of Washington could use additional funds in both FY 1982 and FY 1983.

Question. What is your capability for the Aberdeen-Cosmopolis project?

Answer. Sir, there is a $400,000 capability which would be used for continued planning and engineering studies of flooding problems in this area. Please note the reservations, however, regarding capabilities given in response to Senator Hatfield's request for information on fiscal year 1983 capabilities.

QUESTIONS SUBMITTED BY SENATOR PRYOR

Question. Do you have the money in your fiscal year 1983 budget request to maintain the shallow draft harbors on the rivers in Arkansas that are your responsibility? In your opinion, what is the shortfall by basin? Impacts by basin?

Answer. There are no funds included in the fiscal year 1983 O. & M. budget for maintenance of shallow draft harbors on the Arkansas, Ouachita, or Red River navigation systems. On the Arkansas, the through channel will be maintained and approved on a reduced hourly basis. On the Ouachita and Red River systems, no channel maintenance will be performed and all locks will be closed. Consistent with initial tentative criteria used to develop the nationwide navigation programmatic reduction, it could be anticipated that a funding request for maintenance of the White River in fiscal year 1983 would be eliminated. The Corps is reassessing the fiscal year 1983 budget as it relates to the navigation O. & M. reduction and there may be some changes in the projects affected.

Question. Do you have plans to reduce the hours of operation of the locks on the Arkansas River? To what extent? Have your economists computed the economic costs—loss of jobs—the industry and agricultural interests will incur as a result of this action?

Answer. The fiscal year 1983 budget contains funds to operate the navigation locks on the McClellan-Kerr Arkansas River system 16 hours/day, 7 days/week. The locks are currently operated 24 hours/day, 7 days/week. Reduced lock operation will result in average delays of (up to) 4½ hours for commercial tows with hourly operating costs of $250 to $450. These costs will be reflected in higher costs of agricultural and other products. Higher transportation costs might delay and curtail industrial development along the waterway and in the Arkansas River Valley. An analysis is being made of the impact on jobs in the Corps of Engineers and in private industry as directly related to our actions on this particular project.

Question. The annual tonnages of the Ouachita and the White are less than 2 million tons respectively. Have you made plans or have you been ordered to close either or both these rivers? What would be your fiscal year 1983 costs to shut down each of these rivers as compared to their cost of operating at the fiscal year 1982 level?

Answer. The Ouachita and Black Rivers project will be closed to navigation in fiscal year 1983. The fiscal year 1983 initial tentative budget request contains $536,000 to maintain the project in caretaker status. The fiscal year 1982 estimated operation and maintenance cost work allowance for operation of the Ouachita and Black Rivers project is $3,504,000. Consistent with the initial tentative criteria used to develop the nationwide navigation programmatic reduction, it would be anticipated that a funding request for maintenance of the White River in fiscal year 1983 will be eliminated. The estimated fiscal year 1982 maintenance cost for this project is $2,053,000.

Question. Do you have any plans or have you been instructed to reduce maintenance on the Mississippi River and tributaries in Arkansas?

Answer. A reduction of $150 million has been applied nationwide for operation and maintenance of navigation projects. Of this amount, $6 million, or 4 percent, has been applied to the Mississippi River and tributaries maintenance category resulting in a reduction of $3 million in the dredging project and $3 million in the revetment and dikes project. Both of these projects contribute to navigation on the Mississippi River. A portion of the dredging reduction is for maintenance of channels at four small harbors along the Mississippi River, none of which are in Arkansas, and the remainder for dredging is for shoals in the main channel of the river to assure adequate depths for navigation. Maintenance of revetments and dikes contributes to maintaining the stability and alinement of the main channel of the Mississippi River. The actual locations of maintenance work required each year is dependent on variations in river conditions and the amount required in Arkansas cannot be determined until annual surveys to be performed during the low water season have been completed.

Question. How about flood control?

Answer. There have not been any adjustments in amounts requested for flood control.

Question. Would you care to comment as to why there is no item listed for dredging the Helena Harbor, the Arkansas River, or Osceola Harbor?

Answer. Elimination of shallow draft harbor maintenance from the fiscal year 1983 budget affects the Helena Harbor and Asceola Harbor projects in Arkansas. The estimated fiscal year 1982 maintenance cost for these projects, which are located along the Mississippi River, are $290,000 and $563,000, respectively. The impacts of not performing maintenance dredging of these projects are as follows:

Shoaling harbors will require that tows be light loaded. It is also possible that the harbor could be closed during low river stages. When the harbors are closed, commodities would have to be shipped by other, more expensive means which would increase costs to consumers. Firms dependent on shipments of commerce through the harbors would be severely harmed.

No dredging reduction is proposed for the Arkansas River navigation system compared to previous years.

LEVISA AND TUG FORK OF THE BIG SANDY AND CUMBERLAND RIVERS, KY. AND W. VA.

Chairman HATFIELD. Senator Byrd.

Senator BYRD. Mr. Chairman, you will recall that we enacted Public Law 96–367 which provided in section 202(a):

> The Secretary of the Army, acting through the Chief of Engineers, is authorized to design and construct, at full Federal expense, such flood control measures at or in the vicinity of Pikesville, Ky., and of Grundy, Ga., on the Levisa Fork of the Big Sandy River, Pineville, Ky., on the Cumberland River, and Williamson and Natawan, W. Va., on the Tug Fork of the Big Sandy River as the Chief of Engineers determines necessary and advisable to afford these communities and other flood-damaged localities and their immediate environment on both the Levisa and Tug Forks of the Big Sandy River and the Cumberland River the level of protection against flooding at least sufficient to prevent any future loses to these communities from the likelihood of flooding such as occurred in April 1977, at an estimated cost of $284 million. Non-Federal interests shall hold and save the United States free from damages due to construction works referred to in this section, and maintain and operate all such work after their completion in accordance with regulations prescribed by the Secretary of the Army.
>
> (*b*) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.
>
> (*c*) The Congress finds that the benefit attributable to the objectives set forth in section 209 of the Flood Control Act of 1970 exceed the cost of the flood control measures authorized by this section.

Mr. Chairman, Mr. Gianelli wrote to you a letter on February 22, 1982, in which he mentions six Army civil works projects, and among those six which were set forth in that letter, and which he said in his letter he believed raised major program issues, and in connection with which he apprised you of their current status, "Our concerns with them and the plans we have developed for the current fiscal year and beyond," he included in that letter the project to which I have just referred, among others Levisa Fork and Tug Fork for the Big Sandy River and the Cumberland River, W. Va.

In that letter—I will not take the time to read what he says about the Big Sandy River and the Cumberland River, the Levisa Fork, I will not take the time to read that.

I ask unanimous consent that I may insert in the record at this point the Assistant Secretary's letter to you.

Chairman HATFIELD. Without objection, so ordered.

[The information follows:]

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

2 FEB 1982

Honorable Mark O. Hatfield
Chairman
Subcommittee on Energy
and Water Development
Committee on Appropriations
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

The purpose of this letter is to share concerns which we have regarding six Army civil works projects — five funded under Construction, General and one funded under Flood Control, Mississippi River and Tributaries — included in the Energy and Water Development Act, 1982, which was signed by the President on December 4, 1981. The projects under Construction, General are: Red River Waterway, Louisiana; Levisa and Tug Forks of the Big Sandy River and Cumberland River, West Virginia; Yatesville Lake, Kentucky; Snettisham, Alaska; and San Jacinto River Levee and Bautista Creek Channel, California. The project under Mississippi River and Tributaries is the Tensas River Wildlife Refuge, Louisiana. Because these projects, I believe, raise major program issues, I would like to apprise you of (1) their current status; (2) our concerns with them; and (3) the plans we have developed for the current fiscal year and beyond.

Red River Waterway, Louisiana

The Red River Waterway Project originally was authorized in 1968 at an estimated cost of $234.3 million, measured in 1964 prices. The project is mainly for navigation and involves a 9 by 200-foot channel from the Mississippi River to Shreveport, Louisiana. The total estimated Federal cost of the project, including an allowance for future inflation, is now $1.6 billion. This is exclusive of $66 million non-Federal costs. As of September 30, 1981, $334.2 million had been obligated, and $323.2 million had been expended, largely for construction of Lock and Dam No. 1, and for channel realignments and bank stabilization in Pool No. 1.

The remaining work to complete the project is as follows: for Pool No. 1, approximately $60 million in channel realignment, bank stabilization, and revetment work and $9 million in recreation facilities; and for Pools 2, 3, 4 and 5, approximately $1.2 billion for all incompleted work including locks and dams.

A commitment totaling $1.3 billion, which is the amount required to complete this project, cannot be made by the Administration at this time, given the concerns that:

(1) Budgetary resources for discretionary programs are limited, and priority must be given to Civil Works projects where beneficiaries are willing to contribute increased local funding, and maximum return is achieved for the Federal investment;

(2) Although the benefit/cost ratio at the time funds were initially appropriated for construction (FY 1973) was 1.2 at 3 1/4 percent discount rate, the remaining benefit/remaining cost ratio currently is 0.64 at 7 5/8 percent; and

(3) Only 60 percent of project benefits are for navigation and the remainder for non-navigation purposes.

In light of these concerns, I believe we should fulfill our current contractual commitments to finish Lock and Dam No. 1. At the time the President's budget for FY 1982 was submitted, $57 million was required to finish L&D No. 1 over the period FY 1982-83. As you know, the President requested $27 million in FY 1982, and we anticipate that adequate funds will be provided to complete Lock and Dam No. 1 in FY 1983. Of the $50 million designated for the Red River Waterway in the FY 1982 Conference Committee Report, we have made available to the Corps all the funds that can usefully be applied to Lock and Dam No. 1.

Levisa and Tug Forks for the Big Sandy River and Cumberland River, West Virginia

This project authorizes flood control measures at various communities on the Levisa Fork and Tug Fork of the Big Sandy River as well as at several locations on the Cumberland River. The project was authorized in the Energy and Water Development Appropriation Act, 1981. At the time of authorization, the project cost was estimated at $284 million. The total Federal cost of the project currently is estimated at $702 million, all of which is to be borne by the Federal Government. As of September 30, 1981, a total of $6 million had been obligated, of which $5 million had been expended, primarily for work in connection with highway construction. The project is less than 1 percent complete.

The Administration has no confidence that the $689 million required to complete the project will be available and, in reaching this conclusion, we have been concerned that:

(1) No Corps of Engineers report on this project demonstrates its feasibility;

(2) The project cost estimate has risen to $702 million from its 1980 estimate of $284 million, underscoring the enormous uncertainty which exists as to the design of an effective project;

(3) Contemplated solutions to flood problems which involve construction of huge walls of concrete may not be acceptable to local residents once they understand the magnitude of such structures;

(4) Preliminary plans developed by the Corps contemplate relocation of large segments of the population which may cause dislocations unacceptable to the local populace;

(5) Thus far the only plans we have seen are expensive, and lack sufficient economic justification; and

(6) Budgetary resources for discretionary programs are limited, and priority must be given to Civil Works projects where beneficiaries are willing to contribute increased local funding, and maximum return is achieved for the Federal investment.

In light of these concerns, I am encouraging the Corps to continue its search for feasible projects on specific stream reaches which can be constructed independently. I would hope that each such project could be financed at a cost in the range of $10 - $15 million. Funds appropriated for Tug Fork in FY 1982 have been apportioned for use by the Corps in formulating such plans. Actual initiation of construction, however, would be dependent upon success in developing feasible independently functioning projects. In this effort, I wish to emphasize, we want to work very closely with local interests so that any recommended solution will be satisfactory to the local people as well as the Federal Government.

Yatesville Lake, Kentucky

This project involves a rock fill dam 104 feet high on a tributary of the Big Sandy River. It was authorized in 1965, and its estimated cost at that time was $16.9 million. The purpose of the project was to reduce flood flows along the Ohio River. The total Federal cost of this project has now escalated to $96.7 million, of which $6.5 million would be reimbursed by non-Federal interests. As of September 30, 1981, a total of $12.0 million had been obligated and expended by the Corps, mainly for land acquisition, leaving the project approximately 12 percent complete. The remaining work to complete the project consists of relocations, reservoir clearing, and construction of the dam, roads, and recreation facilities.

The concerns which we have with making an $84.7 million commitment to complete the project at this time are that:

(1) In the principal area of Corps of Engineers responsibility -- namely, flood control -- it is noted that, were the project in full operation during a recurrence of the flood of January 1937, the highest flood of record, the flood stage at Ashland, Kentucky would be reduced 0.18 feet or about 2 inches. The remainder of the project benefits, amounting to three-fourths of the total benefits, is primarily recreation and water quality control;

(2) The remaining benefit/remaining cost ratio is .76 at 7 5/8 percent;

(3) The project cost estimate has risen to $96.7 million from its 1977 estimate of $59 million; and

(4) Although we understand that local aspirations for development are a driving force for the project, there is question whether this particular investment is the appropriate means to bring this about.

In light of these concerns, I believe the only additional commitment which is appropriate at this time is relocation, and consolidation in a single location, of the numerous cemeteries affected by the land acquisition to date. Of the $4 million designated for Yatesville in the FY 1982 Conference Committee Report, the $1 million required for cemetery relocations has been made available to the Corps. Unless the project can be reformulated to provide a high degree of flood control or other purposes which can be jointly participated in by local interests, a plan will be developed to dispose of lands that had been previously acquired.

Snettisham, Alaska

This project was authorized in 1962 at a cost of $41.6 million in 1961 prices to provide power for the Juneau area. The first stage of the project, Long Lake, was completed at a cost of $81.4 million and has been operating since October 1975. This phase of the project has two generators, each with a rated capacity of 23,580 kw. The unfinished stage, Crater Lake, would add 27,000 kw of capacity. The existing power plant and transmission lines were designed to accommodate the Crater Lake generator and carry the additional power.

The work remaining to be accomplished involves the installation of the Crater Lake generator, related power plant equipment, construction of a power tunnel and penstock, and access road. The cost is estimated at $71.6 million in 1981 prices.

The Army believes this to be a good project, and indeed we contemplated start of construction at an early date. Our plans are to use the $2 million designated for this project in the FY 1982 Conference Committee Report to continue engineering and design. Concurrently, we are approaching non-Federal interests to determine whether they would be willing to provide upfront financing.

San Jacinto River Levee and Bautista Creek Channel, California

The San Jacinto project was originally authorized in the 1950 Flood Control Act at an estimated total Federal project cost of $3.2 million, measured in 1946 prices. The project is located in Riverside County about 115 miles from Los Angeles.

The existing project was completed in November 1961 to provide flood protection to 9,800 acres, including the towns of San Jacinto, Valle Vista, and part of Hemet. Floods in 1980 are thought to have caused failure of the project, and the resulting damage was estimated at $20 million. Interim measures undertaken by the Corps under PL 84-99 to restore the integrity of the project totaled $4,750,000. These are 100 percent Federal costs. It is contended that further remedial work is required to insure the integrity of the existing project, and that these costs, amounting to $9.7 million, exclusive of lands, easements, and rights-of-way, ought to be borne by the Federal Government. The Department of the Army believes that the total cost of any remedial work required ought to be shared with local interests on a more equitable basis, and, on the assumption that this can be worked out, I expect the project to proceed.

Tensas River Wildlife Refuge, Louisiana

The project involves establishment by the Secretary of Interior of a wildlife refuge. It was authorized in a separate Act, PL 96-285, approved on June 28, 1980. Public Law 96-285 authorizes the appropriation of $10 million to the Secretary of Interior and $40 million to the Department of the Army to purchase certain lands depicted on a U.S. Fish and Wildlife Service Map entitled "Tensas River National Wildlife Refuge" dated February 1980. The benefits are those associated with acquisition of 50,000 acres of hardwood forest in connection with the authorization and construction of six Federal water resource projects in Louisiana; the total appropriation requirement for the Corps of Engineers for this project is $40.0 million. As of this date, no lands have been purchased.

A commitment to purchase the 40,000 acres is premature, in my view, since the acreage within the refuge was not derived directly from the site specific mitigation needs for each project. However, once we have analyzed the appropriate mitigation requirements for work already under construction, we would provide for those mitigation needs using the $5 million appropriated in Fiscal Year 1982.

In closing, I wish to emphasize that all money appropriated by Congress in FY 1982 for Civil Works projects of the Army Corps of Engineers, as well as prior year carryover funds, has been apportioned. And, in the allocation of appropriated money to specific projects, as indicated above, we have been mindful of the guidance contained in the Conference Committee Report. Only where compelling program considerations dictated otherwise did we avoid further commitments to construction at this time. It is my hope that we may profit from the Congress' further consideration of the program concerns set forth in this letter.

An identical letter is being sent to the ranking minority member of the Subcommittee, the Honorable J. Bennett Johnston, as well as to the Chairman and ranking minority member of the House Energy and Water Development Appropriations Subcommittee.

Sincerely,

Bill Gianelli
William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Senator BYRD. Now, I ask unanimous consent that portions of the letter dealing with the Levisa and Tug Fork in Cumberland, W. Va., be extracted and inserted in the record at this point.

Chairman HATFIELD. Without objection, so ordered.

[The information follows:]

LEVISA AND TUG FORKS FOR THE BIG SANDY RIVER AND CUMBERLAND RIVER, W. VA.

This project authorizes flood control measures at various communities on the Levisa Fork and Tug Fork of the Big Sandy River as well as at several locations on the Cumberland River. The project was authorized in the Energy and Water Development Appropriation Act, 1981. At the time of authorization, the project cost was estimated at $284 million. The total Federal cost of the project currently is estimated at $702 million, all of which is to be borne by the Federal Government. As of September 30, 1981, a total of $6 million had been obligated, of which $5 million had been expended, primarily for work in connection with highway construction. The project is less than 1 percent complete.

The administration has no confidence that the $689 million required to complete the project will be available and, in reaching this conclusion, we have been concerned that:

(1) No Corps of Engineers report on this project demonstrates its feasibility; (2) the project cost estimate has risen to $702 million from its 1980 estimate of $284 million, underscoring the enormous uncertainty which exists as to the design of an effective project; (3) contemplated solutions to flood problems which involve construction of huge walls of concrete may not be acceptable to local residents once they understand the magnitude of such structures; (4) preliminary plans developed by the Corps contemplate relocation of large segments of the population which may cause dislocations unacceptable to the local populace; (5) thus far, the only plans we have seen are expensive, and lack sufficient economic justification; and (6) budgetary resources for discretionary programs are limited and priority must be given to civil works projects where beneficiaries are willing to contribute increased local funding, and maximum return is achieved for the Federal investment.

In light of these concerns, I am encouraging the Corps to continue its search for feasible projects on specific stream reaches which can be constructed independently. I would hope that each such project could be financed at a cost in the range of $10 to $15 million. Funds appropriated for Tug Fork in fiscal year 1982 have been apportioned for use by the Corps in formulating such plans. Actual initiation of construction, however, would be dependent upon success in developing feasible independently functioning projects. In this effort, I wish to emphasize, we want to work very closely with local interests so that any recommended solution will be satisfactory to the local people as well as the Federal Government.

Senator BYRD. Mr. Chairman, I ask unanimous consent that a letter addressed to you by Senators Jennings Randolph, Wendell Ford, Walter Huddleston, and myself in response to the letter to which I just referred by Mr. Gianelli and which letter by the four Senators written under the date of February 11, 1982, be inserted in the record at this point.

Chairman HATFIELD. Without objection.

[The letter follows:]

Letter From Senator Robert C. Byrd of West Virginia, Senator Walter D. Huddleston, Senator Jennings Randolph, and Senator Wendell H. Ford

February 11, 1982

Honorable Mark O. Hatfield
Chairman
Senate Committee on Appropriations
U.S. Senate
Washington, D.C.

Dear Mark:

In the Energy and Water Development Act of 1982 an appropriation of $7.5 million was provided for activities associated with the Tug and Levisa Forks of the Big Sandy and the Upper Cumberland River Project in West Virginia and Kentucky. These funds were appropriated under the Construction, General account.

The appropriation act assumed certain savings and slippages. We understand that of the $7.5 million appropriated, $6 million has been allocated to the Huntington and Nashville districts for work on this project. Thus, $1.5 million in savings was taken from this project. This reduction, while not significant, will delay planning and design work on many important elements of the Tug and Levisa Fork Project. Since this is one of the most innovative flood protection projects developed by the Corps of Engineers, planning and design are essential for successful construction.

While this is a significant problem, a more important matter relating to this project has come to our attention. On February 2, 1982, Assistant Secretary of the Army Gianelli wrote to you and Senator Johnston regarding six civil works projects funded in the 1982 Energy and Water Development Act. One of the projects mentioned is the Tug and Levisa Fork and the Upper Cumberland River Project. When the Congress authorized this project in 1980, it was specifically understood that an economically justified project could not be developed in this location because of the terrain and the types of communities in the valley. The authorization, therefore, waived the required cost benefit analysis. This was justified on the basis of prior damages incurred by the individuals and businesses who must live along the Tug and Levisa Forks of the Big Sandy and the Upper Cumberland Rivers.

The Administration is now calling into question several major assumptions made when this project was authorized. The Corps of Engineers has carried out extensive studies in this valley over the last ten years and has developed a project which is feasible and least costly in providing flood protection. The only workable solution is a series of flood walls and relocation of housing sites to flood-proof areas. Governors Jay Rockefeller and John Y. Brown, Jr. have endorsed the recommended solution.

Of course, the costs have risen as the Corps of Engineers has more carefully developed its report through the planning process. We are confident that the $702 million current cost estimate fairly and accurately reflects the total cost of this project. Therefore, we reject the statement in the letter that no certainty exists as to the total cost of this project. The current estimated cost of the project is $411.5 million.

Budgetary restraints have been recognized and the districts' approach to implementation is to first pursue only the highest priority components of the Tug Fork Valley plan. Other components are being classified as "indefinite," pending more favorable economic conditions.

The Pineville, Kentucky floodwall project is ready for construction. The central business district and about 75 percent of the residential area of Pineville and Wallsend are virtually locked between the levee/floodwall and almost vertical mountain slopes. Once the floodgates are closed, direct escape is not possible, since water surrounds Pineville on all sides. There would be a tremendous loss of life if the existing system, which was inches from being overtopped in the 1977 flood, should fail.

The project elements for the Williamson, West Virginia floodwall has also received extensive planning and will be ready for construction soon. These works are essential to protection for the central business district and economic center of the Tug Fork Valley.

Further, we totally reject the notion contained in items three and four of Mr. Gianelli's letter about how the proposed project will be viewed by the residents of the valley. The design of this project, including the flood walls and housing sites, has been discussed by the Corps of Engineers with all interested parties in the region for some time. The majority of residents believe this project is the only possible solution to their continuing flooding problem. The Congressional Delegation representing this part of West Virginia and Kentucky is totally committed to this plan and believes the majority of the citizens will accept the features of this project.

Lastly, the Administration has apparently failed to interpret correctly the authorization for the Tug and Levisa Fork and Upper Cumberland Project. In authorizing this project, the Congress specifically eliminated the need for economic justification. It may be true that budgetary resources are limited but this project cannot be subject to any limitation on the basis of cost-sharing since the Congress has never addressed that issue on Corps projects in general or this project specifically. Until such time as Congress does address the subject of State or local contributions to civil works projects, no project can be denied funding for failure to provide some local share other than those required by existing law on flood control projects.

We are firmly committed to this program and believe it is necessary to protect these communities, where most of the people employed in the "billion dollar coalfield" reside. We shall continue to seek appropriations for the construction of this project and shall urge this and future administrations to allocate the appropriated funds. Also, we shall continue our efforts with representatives of the Reagan Administration to seek a reversal of the philosophy outlined in Assistant Secretary Gianelli's letter.

Your past assistance on this project is greatly appreciated and we shall work closely with you in the future on this and other projects funded in the energy and water development appropriation legislation.

Truly,

Jennings Randolph
Jennings Randolph

Robert C. Byrd
Robert C. Byrd

Wendell Ford
Wendell H. Ford

Walter D. Huddleston

SECTION 202(2) PUBLIC LAW 96-367

Senator BYRD. I ask unanimous consent that section 202 of the Public Law 96–367, which deals with this particular project, be inserted in the record.

Chairman HATFIELD. Without objection.

[The information follows:]

FLOOD CONTROL PROJECTS

SEC. 202. (a) The Secretary of the Army, acting through the Chief of Engineers, is authorized and directed to design and construct, at full Federal expense, such flood control measures at or in the vicinity of—

(1) Pikesville, Kentucky, and of Grundy, Virginia, on the Levisa Fork of the Big Sandy River,

(2) Pineville, Kentucky, on the Cumberland River, and

(3) Williamson and Matewan, West Virginia, on the Tug Fork of the Big Sandy River,

as the Chief of Engineers determines necessary and advisable to afford these communities and other flood damaged localities and their immediate environs on both the Levisa and Tug Fork of the Big Sandy River and Cumberland River a level of protection against flooding at least sufficient to prevent any future losses to these communities from the likelihood of flooding such as occurred in April 1977, at an estimated cost of $284,000,000. Non-Federal interests shall hold and save the United States free from damages due to construction works referred to in this section, and maintain and operate all such works after their completion in accordance with regulations prescribed by the Secretary of the Army.

(b) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

(c) The Congress finds that the benefits attributable to the objectives set forth in section 209 of the Flood Control Act of 1970 exceed the cost of the flood control measures authorized by this section.

POINT-COUNTERPOINT RESPONSE

Senator BYRD. Mr. Chairman, I ask unanimous consent that a point-counterpoint memorandum, which has been devised by Senator Huddleston and myself in recognition of the points that were raised by the Assistant Secretary in his letter to you, be inserted into the record at this point.

Chairman HATFIELD. Without objection.

Senator BYRD. I would hope, Mr. Secretary, you would review our written counterpoints which I believe will provide some useful information to you and it might be helpful, if you wish to comment for the record in response to any of these counterpoints.

[The information follows:]

POINT-COUNTERPOINT TO ASSISTANT SECRETARY OF THE ARMY GIANELLI'S FEBRUARY 2, 1982, LETTER

1. Point. No Corps of Engineers report on this project demonstrates its feasibility.

Counterpoint. The draft report and EIS is currently available and could be converted to final form by April 1982. The draft underwent interagency coordination and was circulated for public review in the fall of 1981. That report indicates that the proposed plan for the Tug Valley portion of the total Section 202 area is the best plan for this area when full consideration is given to cost effectiveness, environmental impact, social acceptability, implementability, and overall practicality.

2. Point. The project cost estimate has risen to $702 million from its 1980 estimate of $284 million, underscoring the enormous uncertainty which exists as to the design of an effective project.

Counterpoint. The $284 million figure was a cost estimate which was based on a constant dollar price level. That estimate was used by Congress to define a project and did not represent a cost ceiling. The $702 million represents a full funding estimate of what the Corps understood the project to be. When the $284 million estimate is considered on a fully-funded basis, it very closely approximates the $702 million fully-funded estimate.

3. Point. Contemplated solution to flood problems which involve construction of huge walls of concrete may not be acceptable to local residents once they understand the magnitude of such structures.

Counterpoint. As indicated in the draft report, a major segment of the Tug Valley flood damage reduction planning effort involved an extensive public involvement program geared to informing and soliciting views and opinions of both the general public and local, state, and Federal agencies and interests concerning potential and proposed flood damage reduction measures. In 1981 alone fourteen (14) workshop meetings, including one in every community for which a structural protection project was proposed, and three (3) formal public meetings were held. More than 1,000 persons attended these meetings. Alternative plans were fully explained during these meetings. The proposed plan has been very favorably received and is supported by community leaders and affected citizens. Letters of endorsement and support have been received from each of the local governments. The details of the proposed flood walls have been discussed with local residents on a number of occasions. They recognize the extreme height of some of the proposed walls, but also well remember the extreme height of the April 1977 flood. Our assessment indicates that high walls are indeed acceptable in the Valley.

4. Point. Preliminary plans developed by the Corps contemplates relocation of large segments of the population which may cause dislocation unacceptable to the local people.

Counterpoint. The proposed plan calls for the larger established community centers along the Tug Fork to be protected in place. Only about 20 percent (approximately 1,200 families] of the total flood plain population would be protected through a relocations programs. As a part of the comprehensive planning efforts undertaken for the Tug Valley, extensive investigations utilizing research specialists from three major universities have been accomplished in order to determine the viability and acceptability of relocations as a means of reducing flood damages. Results of these investigations as well as feedback from an extensive public involvement program indicate that relocation is a very acceptable approach to residents of high hazard flood plain areas.

5. Point. Thus far the only plans we have seen are expensive, and lack sufficient economic justification.

Counterpoint. Given the rugged topography of this energy rich area, solutions to flooding problems are expensive; however, the major factors employed in the formulation of the plan proposed in our report were cost effectiveness, practicality, and implementability. In authorizing design and construction of flood damage reduction measures for the Tug Valley, Congress found that the total benefits for national economic development, environmental quality, social well-being, and regional development pursuant to Section 209 of P.L. 91-611 exceed the costs of such measures and are therefore justifiable. This was done by subsection c of the project authorization.

6. Point. Budgetary resources for discretionary programs are limited, and priority must be given to Civil Works projects where beneficiaries are willing to contribute increased local funding, and maximum return is achieved for the Federal investment.

Counterpoint. This point is recognized and reflected fully in the districts current approach toward implementation. The highest priority components of the Tug Fork Valley plan are being pursued first. Others are being classified as indefinite, pending a more favorable national economic outlook. As conditions change over time, other components will be reassessed to determine their applicability to the problems of the time.

Senator BYRD. I ask unanimous consent also, Mr. Chairman, that I may insert in the record at this point an article reprinted from the Williamson, W. Va., Daily News, Thursday, February 17, 1982, which directs itself to Mr. Gianelli's concerns about the Tug Valley project and which I think, very succinctly and cogently and persuasively, makes the counterpoints to the points that were raised in his letter to you.

Chairman HATFIELD. Without objection.

[The article follows:]

[From the Williamson (W. Va.) Daily News, Feb. 17, 1982]

President Reagan's budgetary axe is poised to strike a damaging blow to the very lifeline of the Tug Valley. The Reagan administration has eliminated all funding for the Tug Valley flood protection projects in its buget proposals for the 1983 fiscal year.

Years of hard work by Tug Valley leaders and yeomanlike efforts by Sen. Robert C. Byrd in the U.S. Senate are in jeopardy, based on the recommendation of one William R. Gianelli, assistant secretary for the U.S. Army.

Mr. Gianelli expressed six specific concerns about the Tug Valley project in a letter to Rep. Tom Bevin, chairman of the House subcommittee on Energy and Water Development. He recommended that the corps' approach to the Tug Valley flooding problems be scrapped in favor of what he called "feasible projects on specific stream reaches which can be constructed independently."

In other words, toss the Tug Valley a bone or two, but do not address the problem of river flooding. Use a few Band-Aids. Skip major surgery.

Mr. Gianelli's concerns about the Tug Valley project look good on paper, but we must examine his justifications in the proper context.

His primary concerns are:

✓ No Corps of Engineers report on the project demonstrates its feasibility;

✓ The cost estimate has risen to $702 million from the 1980 estimate.

✓ Solutions to flood control problems which involve construction of huge walls of concrete may not be acceptable to residents of the area once they understand the magnitude of such structure;

✓ Preliminary plans developed by the Corps call for relocation of large segments of the population which may cause dislocations that are unacceptable to the local populace;

✓ Existing plans are expensive and lack sufficient economic justification;

✓ Budgetary resources for discretionary programs are limited and priority must be given to civil works projects where beneficiaries are willing to contribute to increased local funding.

But, let's look more closely at Mr. Gianelli's points.

Feasibility:

Mr. Gianelli's point here is unclear. Exactly what does he mean by feasibility? The proposed floodwalls in Williamson — the economic heart of the Tug Valley — would be high enough to prevent the worst flood in the Tug Valley's history. The Matewan cut-off project would all but eliminate that community's continual problems with both river flooding and backwater. To the flood-ravaged people of the Tug Valley, there is nothing infeasible about these plans.

Rising costs:

Is Mr. Gianelli saying that the Tug Valley must pay the price for inflation? Are we to be blamed because the Carter administration and Reaganomics have failed to bring the economy under control?

Was it not assumed when this project was approved by Congress that costs would increase year to year? To act suprised about inflation now represents a poor attempt to find an excuse to kill this project.

Concern over the floodwalls and relocation:

The corps' plans have been made clear in nearly a dozen public meetings in the past two years and spelled out in simple English in the Williamson Daily News. Thousands of Tug Valley residents have turned out for the flood meetings and given the plans their approval, as have all affected government bodies. The Mingo County Commission has agreed to accept maintenance responsibility for the project.

What additional signs of local acceptance does Mr. Gianelli want?

Economic justification:

What dollar value does Mr. Gianelli place on human suffering? On sleepless nights during rain storms? On constant worry that a lifetime of work will be eliminated the next time the Tug River leaves its banks?

But let's talk real dollars and cents: how can Mr. Gianelli estimate the economic potential of the Tug Valley coalfields if this area had the benefits of permanent flood protection to spur the growth in housing, human services and recreation? The Tug Valley sits on one of the world's richest lodes of coal — up to 10 percent of the world's best coal — but this area has never had a clear shot at developing and expanding this natural bonanza.

With permanent flood protection, the Tug Valley can provide a substantial share of the coal that America must have to achieve energy independence. The area can attract the industry and professional people it lacks, can continue to cut welfare rolls as the coal mines and related industries provide more jobs and can become a more productive part of the American economy.

Isn't that exactly what the President has called for in his economic program?

Increased local funding:

The size of the investment is the primary reason that the federal government is involved in this project. If it were a smaller project, it would be handled by local or state governments, or even by the people of the Tug Valley themselves. Since the size of investment involved precludes this, we must look to the federal government.

Is it not the function of government to do for the people what they cannot do for themselves?

By saving money now on flood protection, the government assures it will be spending money later on flood relief. Without flood protection, there will be more floods. There will be millions more in government emergency aid expended. There will be millions more in emergency loans and grants to rebuild a shattered community. There will be millions more in salary and expenses for federal personnel sent to help get the Tug Valley out of the mud. There will be no expansion of industry, no increase in mine production and employment.

How can that be justified economically?

It is obvious, then, that Mr. Gianelli has compiled excuses for cutting off the project funding. And that is all these are: excuses, not reasons.

The bottom line is this:

There is not one condition existing now that did not exist when Congress gave its approval for this project and ordered the U.S. Army Corps of Engineers to build it. All of this leaves us with one question:

Does Congress direct the Corps of Engineers or does the Corps of Engineers direct the Congress?

To eliminate this project now is unconscionable.

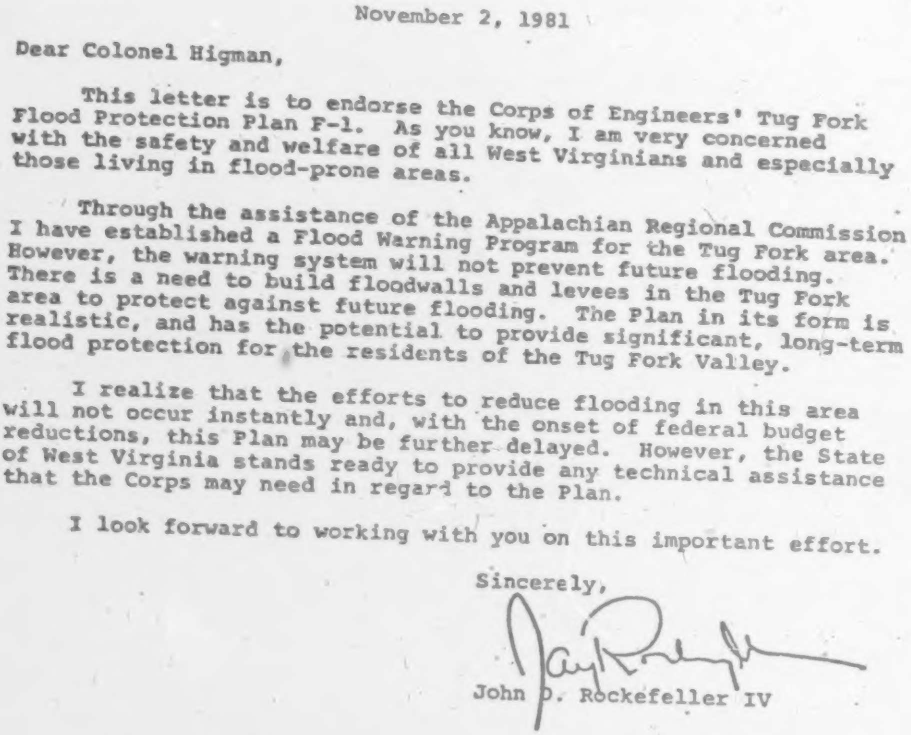
LETTER OF SUPPORT FROM GOVERNOR ROCKEFELLER OF WEST VIRGINIA

Senator Byrd. Finally, Mr. Chairman, I would ask unanimous consent that letters from Governor John D. Rockefeller IV, of the great State of West Virginia, which is almost heaven, be inserted in the record at this point in which Governor Rockefeller gives his full support to the Tug Fork Valley plan.

Chairman Hatfield. Without objection.

[The letter follows:]

Letter From Gov. John D. Rockefeller IV of West Virginia



November 2, 1981

Dear Colonel Higman,

This letter is to endorse the Corps of Engineers' Tug Fork Flood Protection Plan F-1. As you know, I am very concerned with the safety and welfare of all West Virginians and especially those living in flood-prone areas.

Through the assistance of the Appalachian Regional Commission I have established a Flood Warning Program for the Tug Fork area. However, the warning system will not prevent future flooding. There is a need to build floodwalls and levees in the Tug Fork area to protect against future flooding. The Plan in its form is realistic, and has the potential to provide significant, long-term flood protection for the residents of the Tug Fork Valley.

I realize that the efforts to reduce flooding in this area will not occur instantly and, with the onset of federal budget reductions, this Plan may be further delayed. However, the State of West Virginia stands ready to provide any technical assistance that the Corps may need in regard to the Plan.

I look forward to working with you on this important effort.

Sincerely,

John D. Rockefeller IV

LETTER OF SUPPORT FROM GOVERNOR BROWN OF KENTUCKY

Senator BYRD. I also ask unanimous consent on behalf of Messrs Ford and Huddleston, that a letter from Governor John Brown, Governor of Kentucky, which is the State which is contiguous to the State that is almost heaven, be inserted in the record and in which letter Governor Brown likewise supports the plan.

Chairman HATFIELD. Without objection.

[The letter follows:]

LETTER FROM GOV. JOHN Y. BROWN, JR., OF KENTUCKY

December 11, 1981

Colonel James H. Higman
Commander and District Engineer
Huntington District
U.S. Army Corps of Engineers
P. O. Box 2127
Huntington, West Virginia 25721

Dear Colonel Higman:

The Tug Fork Valley Comprehensive Flood Control Project provides many significant benefits to the residents of Pike, Martin and Lawrence Counties in the Commonwealth of Kentucky. I appreciate the benefits of this project for our residents and our adjacent neighbors in West Virginia as well.

Various state agencies have reviewed the studies and the comprehensive plan for the Tug Fork Valley as prepared by your office and concur with the findings of the study. The F-1 option which provides for the Big Bend Cutoff seems to best serve the state. On behalf of the Commonwealth of Kentucky, I hereby endorse the F-1 option.

Since this project has such high benefit potential for the residents of the area who have suffered the problems of flooding in the past, I request that this effort be made in the most expeditious manner feasible. Please contact me if I may be of assistance.

Sincerely,

John Y. Brown

John Y. Brown, Jr.
Governor

F-1 DESIGN PLAN

Senator BYRD. Now, Mr. Gianelli, you and I have discussed Tug Fork project along with my colleagues Senator Randolph, Mr. Rahall, and representatives of Kentucky in my office on February 18, 1982.

First, we had a very good discussion and you are very considerate and very patient and you listened carefully to the things that we had to say, you listened to our constituents from the Williamson area and you indicated a very understanding and sympathetic response to our problem.

What I would like is to get are a few answers, and I don't want to take much time, Mr. Chairman.

First, Mr. Gianelli, I want to insure that the F-1 design plan—you are familiar with that plan, the F-1 design plan? That is the plan that has been designed over a period of some years and which has undergone several public meetings in the Williamson area and which has been advancing to completion, that is referred to as the F–1 design. And during our discussion on that occasion you were familiar somewhat with it.

Mr. GIANELLI. Let me comment on that if I could for a moment.

I have not seen the detailed plan. It is my understanding it has been worked out at the district level of the Corps. It is my understanding it is in the process of review by the Division Engineer of the Corps. It has not yet proceeded to the Chief of Engineers' Office but, eventually, I assume it will reach my desk, but it has not yet.

COMPLETION SCHEDULE

Senator BYRD. That is what you stated in our meeting on that occasion.

My question is, Is there any reason why the F–1 plan will not be delivered to the Ohio River Division headquarters in Cincinnati before April 1, 1982?

Mr. GIANELLI. Perhaps we can ask the Corps to respond to that.

General BRATTON. It is my understanding that the Huntington district, which has been the lead district preparing, planning, and studying and responding to section 202, has its plan in final order, will be sending it this month to the Division headquarters, Ohio River Division, at Cincinnati. I wouldn't expect it would stay there very long before being sent up here to Washington via the Division Engineer, because I spoke to him on this when I visited with him the week past.

Senator BYRD. Is the F–1 design plan for the Tug Fork project continuing on schedule? Is the answer yes or no?

General BRATTON. Yes; at this point it is.

Senator BYRD. Is there any reason why the F–1 plan would not be delivered to the Ohio River Division headquarters in Cincinnati before April 1? Do you anticipate that it will be delivered before April 1?

General BRATTON. I am quite sure it will be, sir.

Senator BYRD. Am I correct in stating that the detailed design of specific project at Tug Fork can begin as soon as the F–1 design received General Kem's approval?

General BRATTON. It could.

Senator BYRD. That is correct?

General BRATTON. Yes, sir.

Senator BYRD. Is it also my understanding that General Kem's office has reviewed and commented extensively to date on the District Engineer's draft of the F–1 plan?

General BRATTON. Yes, sir.

Senator BYRD. Is that answer yes?

General BRATTON. Yes, sir.

Mr. GIANELLI. Can I interrupt? I want to be sure that General Bratton and I are on the same wavelength. I gather your question was, Could the plan be implemented if approved by the Chief of Engineers. Was that basically the question you asked?

Senator BYRD. I will get to that in a moment.

Is there any reason why General Kem cannot approve the F-1 design immediately after he sees it from the district office in Huntington?

General BRATTON. I know of no reason why at his level he can't approve it. I don't know of any problems he has with it. His approval then would result in forwarding of the plan here to my office in Washington.

Senator BYRD. Mr. Gianelli, if you would present the question that you wish to respond to.

Mr. GIANELLI. I think you clarified it.

USE OF FISCAL YEAR 1982 APPROPRIATION

Senator BYRD. Please indicate what the Corps' present spending plans with respect to $7.5 million which was appropriated for Tug Fork and related projects in the fiscal year 1982 energy and water development appropriations bill.

Mr. GIANELLI. Let me respond to that, if I can. The plan is to have the Corps complete its plans and to develop a series of projects which should proceed with respect to the Levisa and Tug Fork, the Big Sandy, and the Cumberland River area.

Senator BYRD. I only have two more questions, Mr. Chairman and I will proceed promptly with them.

FISCAL YEAR 1983 BUDGET REQUEST

Is it correct that fiscal year 1983 budget contains no funding for the Tug Fork flood control project?

Mr. GIANELLI. It does not, Senator.

Senator BYRD. Would it not be appropriate to review the funding requirements for this project once the F-1 design has been approved by General Kem, if it is approved?

Mr. GIANELLI. I think it has to go further than General Kem. I think it has to be approved up at the level of the Secretary of the Army and, presumably, as soon as the Corps submits its plans, we would like to take a look at those plans. That will be the basis for whatever budget requests appear appropriate. Following that, until we get the Corps' plan, until we take a look at the project which perhaps can be implemented, and what the budget requirements are for those projects, it is not possible to estimate exactly how much funding will be required in the out years.

APPROVAL OF F-1 PLAN

Senator BYRD. Would you be in a position, then, to commit yourself to a date as to when your level of approval could be?

Mr. GIANELLI. I haven't seen the plans yet which the Corps is preparing and after we have them I would like to look at them very closely and, depending upon whether we have any problems with it or not, would depend on how long it would take for a review at our level. Certainly we will try to expedite that.

Senator BYRD. Whenever the F-1 plan has been approved by General Kem, will I be notified of that?

Mr. GIANELLI. We can ask the Corps, certainly, to have the Division Engineer advise your office as the report progresses. I see nothing wrong with that.

Senator BYRD. I appreciate it if we can be advised of the development along the way and also I would like to ask that I particularly be advised when the F–1 design plan has been approved by General Kem because it may be appropriate for the committee to begin considering some review of the funding requirement of the project.

Now the final question I would have, Mr. Chairman, would be one which I would like to have on the record and that is.

Mr. Secretary, am I not correct in stating that your letter to Mr. Hatfield and the instructions that went out to the District Corps of Engineers in connection with that letter were not intended by you to mean that the Corps of Engineers was ipso facto automatically to reject and put aside the F–1 plan that it had been working on for these years?

Mr. GIANELLI. Senator, I can't attest to the validity of the F–1 plan. I indicated to you on our meetings that I have some reservations in terms of what I understand are included in those plans, and I would like to look at them before I indicate whether that would be approved.

Let me comment further. It is certainly not the intent of our office to nullify any efforts to carry out the logical plans or reasonable plans of the Tug Fork or Levisa Fork areas and we will be doing that.

Senator BYRD. And, specifically, your letter was not meant to say to them, "Just forget what you have been doing on that plan, put it aside, start all over again"? Your letter doesn't intend that?

Mr. GIANELLI. It did not intend that.

Senator BYRD. Finally, Senator Huddleston is unable to be here today. I have some written questions from him that he asked that I submit for the record, Mr. Chairman.

Senator BURDICK [presiding]. Fine.

Senator BYRD. Thank you, Mr. Chairman.

Senator BURDICK. Senator Sasser.

OPERATION AND MAINTENANCE USER FEE PROPOSAL

Senator SASSER. Mr. Secretary, I would like to join my colleagues and their remarks concerning the ill-advised reductions in the Corps' "Operation and maintenance account." Frankly speaking, as one Senator, I resent what I think are heavy-handed tactics on the part of the administration in this particular instance. A case can be made that it amounts to nothing but blackmail and, in my opinion, is not responsible.

The administration is threatening the Congress. You are saying, in essence, that you are willing to close down a vital transportation link in order to force enactment of user fees. Now, I submit, sir, respectfully, that the legislative process just doesn't work that way. The question of user fees must be debated on its own merits.

Our very valuable and distinguished chairman, Senator Hatfield, said earlier the question of these fees is not a question that is before this particular committee. Now, what is before this subcommittee is administration policy to reduce and, in some instances, eliminate barge traffic on many of this Nation's waterways.

Now, I intend to vote to restore these funds because I believe it is irresponsible at this time in our history to try to fail to provide adequate funding levels for the Nation's waterways system.

What the administration has said to the Congress and the American people is, in essence, if the Congress doesn't enact user fees, well, we are just going to close these facilities down without regard to their impact on the economy, without regard to the impact on unemployment. I can't speak for the rest of the committee, but I believe these funds are going to be restored.

In my native State of Tennessee these policies of cutting back on operation and maintenance would completely close lock operations on the Cumberland River, a very vital waterway artery in my State, and close much of the Tennessee River.

IMPACT OF REDUCTIONS

In my State, waterway traffic plays a significant and important role in the healthy State economy. If barge traffic is shut off and the rivers are closed down as this policy indicates, I foresee literally dozens of businesses and industries shutting down, hundreds of people losing their jobs, leaving my State of Tennessee and going to other parts of the country.

Now, I might say that the State of Tennessee, a sunshine State enjoying the benefits of supply-side economics, now has a 12.1-percent unemployment rate and it is going up rapidly. If the rivers are closed, that unemployment is going to go even higher.

So, I would like to ask you, Mr. Secretary, if this administration in deliberations on funding the O. & M. account, did you consider the devastating impacts that these reductions are going to have on various parts of the country, including my State of Tennessee, and did the administration understand or were you told by your subordinates and your staff that if these funds were not appropriated that the impact could be serious, would be serious?

Mr. GIANELLI. I understand exactly what you are saying. Let me first address the first comment you made.

I think we have a problem in terms of funding and I certainly don't think the administration intended to put the inference on what we are trying to do here that perhaps you have given it.

What we have, and what I tried to indicate earlier, is a financial problem, and it seemed to us to make sense to take a look at savings wherever we could and in whatever area is possible. One of the areas we thought we could save on was, perhaps, to eliminate some O. & M. of the high-cost navigational waterways, some of the operation and maintenance cost attributable to them, and that is what we are doing.

As I indicated also in my statement, we are asking the Corps to go back and look at those that would come out of the first criteria that the Corps developed to see whether some should not be closed and cut back, and we expect to have some substitutes, I am sure, very shortly, with respect to some of those original projects that might have been curtailed.

And that work will go on. But certainly, the intent is to restrain the cost of operation and maintenance to keep open many of the necessary and vital waterways. What we are talking about is 25 percent of the operation and maintenance cost for navigation, and that certainly we don't think will have the impact perhaps that you referred to in your statement. Hopefully it will not.

CHEATHAM LOCK AND DAM

Senator SASSER. Let me talk specifically about the justification for locks and dams in my State. Your justifications indicate that the Cheatham lock and dam on the Cumberland River will be subject only to reduced hours of lock operation. But, the officials in the Nashville office of the Corps of Engineers tell me that the Cheatham lock and dam is going to be closed, it is going to be shut down, and so is all barge traffic on that river. That means that the DuPont plant, one of the largest facilities in this area of the State of Tennessee, cannot be reached by river for transportation of chemicals. It means that oil cannot move up and down and gasoline cannot move up and down the Cumberland River and get to Nashville, Tenn.

TENNESSEE RIVER LOCK OPERATION

Now, these justifications also indicate that on Tennessee River, the hours of lock operation are only going to be reduced. The Corps of Engineers officials in the State of Tennessee tell me that operations will be closed or shut down entirely on the Tennessee River upstream from the Chickamauga Dam and reduced on other parts of the river.

I submit to you, Mr. Secretary, that the justifications sent to this committee don't tell the complete story; they are deceptive.

Will you provide for this committee a detailed explanation of the impact of reductions on operations and maintenance to my State which is so dependent on waterways operations?

Mr. GIANELLI. We will certainly ask the Corps to do that with respect to those projects identified in your State.

Let me say that if the description you gave with respect to the impact of the reduction on the project you describe is true, I would expect that the district and Division engineers will shortly be submitting to us a substitute project for perhaps some reduction or curtailment other than the one you mentioned. As I indicated earlier, that subject is back in the hands of the district engineers, at the present time, and we expect them to come back with some revisions to the list.

If the facts are as you state them, perhaps the responsible district engineer then will recommend a substitute project for the one you indicated.

[The information follows:]

IMPACTS OF OPERATION AND MAINTENANCE REDUCTIONS IN FISCAL YEAR 1983

TENNESSEE RIVER, TENNESSEE, ALABAMA AND KENTUCKY

1. Elimination of the third shift at the following locks would result in 33% of all commercial tows arriving while the lock is closed to navigation. The estimated cost is based on the assumption that each of the tows will be delayed on the average of 4 hours. The breakdown of direct transportation cost is as follows:

Pickwick Lock	$670,000
Wilson Lock	500,000
Wheeler Lock	400,000
Guntersville Lock	300,000
Nickajack Lock	400,000
Chickamauga Lock	125,000

2. Kentucky Lock

a. The elimination of the third shift at Kentucky Lock would result in approximately 500 tows being delayed to infinity; forcing the commodity to be moved by some other mode. This equates to approximately 3.75 million tons. The average haul in miles on the Tennessee River is 140 miles. The increased transportation cost would be $1,050,000 assuming that waterway transportation is .002 mills per ton miles less than other modes of transportation.

b. The elimination of the third shift would also result in 33% of all remaining tows arriving while Kentucky Lock is closed to navigation. The navigation cost would be $1,100,000 based on an average delay of 4 hours and operating costs of $250 per hour for 1,100 tows.

3. Elimination or reduction in the hours of operation at the following locks would result in the increased navigation costs shown below:

a. WATTS BAR (2 shifts to 1)
140 tows x 8 hrs. x $250/per hour = $280,000

b. FORT LOUNDOUN (2 shifts to 1)
90 tows x 8 hrs. x $250/per hour = $180,000

c. MELTON HILL (closed to navigation)
(operated by special arrangement)
28 tows x 8 hrs. x $250/per hour = $ 56,000

4. The reduction in hours of operation at the Tennessee River locks equates to a direct transportation cost of $4,400,000.

CHEATHAM LOCK AND DAM, TENNESSEE

Elimination of one shift at Cheatham will result in 246 tows being delayed.
246 tows x 4 hrs. x $250/per hour = $246,000

BARKLEY LOCK AND DAM, KENTUCKY AND TENNESSEE

Elimination of two shifts at Barkley Lock will result in 580 tows being delayed.
580 tows x 8 hrs. x $250/per hour = $1,160,000

Mississippi River Commission

SUMMARY OF IMPACTS FOR MISSISSIPPI RIVER AND TRIBUTARIES MAINTENANCE REDUCTIONS - FY 1983

CATEGORY STATE PROJECT	ORIGINAL BUDGET ($000)	REDUCTION ($000)	BUDGET ($000)	TYPE OF COMMERCE	MAJOR INDUSTRIES	DATE OF IMPACT
FC, MR&T Dredging (Cont'd)				McKellar Lake, Memphis, TN Wood Products Navigation Aids Bulk Petroleum Grain Wood By-Products Sand and Gravel Towing Service Lumber Mat Casting Chem-cals Fuels Electrical Equipment Steel Bulk Commodities Cement Nuclear Power Plant Equipment Rocket Boosters Recreation	McKellar Lake, Memphis, TN Rivergate Port Allen Steam Plant CBI Nuclear Co. Chemtech Corp, Cargill, Inc. River Cement Co. Delta Refinery Gulf Refinery Oil Co. Ashland Chemical Public Terminal for Foreign Trade Zone Mid-South Terminal Corp. Riverside Park Marina	1 Oct 82

NARRATIVE SUMMARY PROGRAMMATIC IMPACT: Project would have to close for approximately 4 months beginning 1 Oct 82 due to channel entrance siltation. Movement of 3.6 million tons of commodities into and out of the McKellar Lake Harbor would be prevented. Commerce would have to utilize higher priced methods of transportation, impacting cost of goods involved, or experiencing costly delays. This would adversely affect the local economy in the area served by the project, and possibly the national economy considering all the products involved.

SUMMARY OF IMPACTS FOR OPERATION AND MAINTENANCE, GENERAL REDUCTIONS - FY 1983

CATEGORY STATE PROJECT	ORIGINAL BUDGET ($000)	OCE REDUCUCTION ($000)	FY 83 BUDGET ($000)	TYPE OF COMMERCE	MAJOR INDUSTRIES	DATE OF IMPACT
Navigation: Channels and Harbors A SHALLOW DRAFT						
TENNESSEE Wolf River	475	-475	0	Soybeans, Wheat, Steel Lumber	Marquette Cement Co. Missouri Portland Cement MDG Comb. Steel. Co. Continental Grain, Cargill, U.S. Coast. Guard, Patton-Tully, Warren Bros. Const. Co. Volunteer Park Marina Memphis Yacht Club Memphis Queen Excursion Boats Waterways Marine, Inc. Bunge Corp. Anderson Tully Co. Marine Sales, Inc. Bunge Corp. Approx. 17 Industries Total	1 Jul 83

NARRATIVE SUMMARY PROGRAMMATIC IMPACT: Wolf River Harbor is a major port on the inland waterway system. Without these funds, the annual dredging necessary to keep the harbor operational during annual low river stages (Jul-Nov) cannot be performed. This timeframe is when heaviest farm commodities are moved. The harbor would be closed to navigational traffic at least 50 percent of the time and light loading of tows for the remainder of the 5 months. When the harbor is closed to navigation commodities would have to be shipped by other more expensive means which would greatly increase cost to the consumer, thereby increasing the inflation rate. The economic impact would severely harm the firms dependent upon the shipment of commerce though the harbor. If maintenance dredging is not performed during 1983, costs to restore navigation depths in 1984 would be much higher and increase the risk of damage to property and equipment. 1979 tonnage was 1,401,134 tons.

SUBSTITUTE PROJECTS

Senator SASSER. Let's talk about substitute projects just a moment.

While the Corps is planning to close down lock operation on the Cumberland River which is so vital for commerce, you are planning to make capital expenditures, which, in my judgment, could be deferred and the funds put into lock operation.

For example, at Old Hickory Dam in my State the justifications that have been submitted indicate that you plan to build a new resource manager's office and also build a powerplant trainee classroom.

Now, Mr. Secretary, I agree with you, these are difficult budget times. But to this Senator it makes more sense to defer these kinds of lower priority expenditures such as building a manager's office or powerplant trainee classroom and put these funds in the operation of our locks to keep our waterways open.

I am sure that my constituents would prefer it that way, and perhaps we have a dislocation of priorities here.

One other question, Mr. Secretary. I have indicated to you that the proposals which have been put forward here would, in essence, close the Cumberland River to river traffic and all but close the Tennessee River. I am told that reduced hours at Kentucky lock on the Tennessee River would mean delays of 5 days or more before a barge can use that particular lock.

There is a basic inconsistency here in policy. First, your policy indicates that if you don't get your way on the user fees you are going to keep the locks closed, yet you are proposing funding to study improvements for lock operations on the Tennessee. On page 3 of the O. & M. justification, the Ohio River Division, you are requesting $250,000 for a study for improvement.

The justification states:

> Traffic congestion at Kentucky lock on the Tennessee River has been increasing in recent years. This congestion is caused by, to a large extent, Cumberland traffic which bypasses the difficult and dangerous navigation conditions on the Cumberland River below Barkley lock.

So while you are saying in the justifications you need $250,000 to do a study because of traffic congestion at Kentucky lock, you are saying, on the other hand, you are going to cut back O. & M. funding and shut down the Kentucky lock altogether.

Mr. GIANELLI. It sounds like an inconsistency. We are going to check that out.

Senator SASSER. I wish you would do that, Mr. Secretary, and give this committee a report.

Mr. GIANELLI. We will be pleased to do that.

[The information follows:]

> There does not appear to be an inconsistency here. The study will investigate methods of improving navigation in the lower Cumberland River in order to make better use of Barkley lock, which would relieve congestion at Kentucky lock. The study will be even more important if the hours of operation are to be reduced at Kentucky lock. Once the list of projects to be included in the $150 million reduction is finalized, we will be reviewing other budget items to identify such potential conflicts.

MEMPHIS HARBOR, TENN.

Senator SASSER. I want to discuss another matter which is important to my State of Tennessee and, like the minority leader, I think it is about as close to heaven as you can get. For several years I supported improvement at the Memphis Harbor. I think improvements in this harbor, Memphis, Tenn., is the kind of productive investment that this Federal Government should be undertaking. It means jobs. We have one of the highest unemployment rates in the Southeast in the Memphis, Tenn., area. Expansion of this harbor would mean expansion of business and that is going to mean new tax revenues for the U.S. Treasury.

My distinguished and able colleague, Senator Baker, and I have introduced legislation to authorize this project. A delegation in the House of Representatives has introduced an identical bill.

Mr. Secretary, we need your cooperation. Five years ago the final report of the Mississippi River Commission was sent to the Chief's Office. Finally, last year the Chief of the Corps of Engineers sent his report to me or to you and there has been no action since your Office received the Chief's report.

Frankly, I disagree with the suggestion in the Chief's report. I think it is unrealistic for the Federal Government to require local government to pay over 60 percent for cost on a project that is going to reap the Federal Government a large tax windfall. The bill which I introduced, along with Senator Baker, provides for an equitable 50/50 split in cost.

I understand you are holding up your report to the Office of Management and Budget because you feel that even the Chief's cost sharing isn't high enough and I understand that you feel local interest on projects of this sort to be required to pay back the total cost of the project; 100 percent payback in just 10 years.

Mr. Secretary, this just isn't realistic. The Federal Government has been, has got to be, and must continue to be a full partner in waterway development. This kind of philosophy where the local folks are forced to pay for the whole business, though it is a national resource, will cripple business expansion along the waterways because local communities just can't do it alone, they just don't have the tax base; they don't have the financial resources, and increasingly, I find that the Federal Government is abdicating its legitimate role in vital areas such as this one.

I urge you to rethink your position on this just as our distinguished chairman, Senator Hatfield, did. We desperately need jobs in ths country and we desperately need them in our State. We need expanded business development. And the Federal Government is simply going to have to provide the proper incentives, the proper leverage, the kind of development represented by the Memphis Harbor.

Mr. Secretary, I am prepared to work, move on this project, I hope with your cooperation, but I suspect we are going to move forward with or without your support, but I want to say we really want your support on it and I would like to see a more realistic approach by the administration for the development of our national waterways. And I hope I can count on you to work with local officials and interested Members of Congress in moving this Memphis Harbor project forward.

Let me ask you, sir, when do you anticipate approving the project and sending your report forward to OMB?

Mr. GIANELLI. I am not entirely familiar with the report, but we will be glad to get back to you on that.

Let me say, I would hope to follow up on the suggestion of the chairman concerning his legislation. I think that is going to be the key to moving a lot of these and if we can work out some sort of arrangement that would accommodate both the administration and the people concerned, I think we will get a lot of these projects going.

[The information follows:]

> I would anticipate our review of this project could be completed this spring, and if we have no unresolved concerns, the report would then be provided to OMB for their review and clearance. Before we are able to do that, however, we will need to understand the relationship between this project and the cost recovery proposals for inland waterways set forth by the administration.

Senator SASSER. Thank you, Mr. Secretary.

Thank you, Mr. Chairman.

INNOVATIVE FINANCING FOR NEW CONSTRUCTION STARTS

Senator BURDICK. Mr. Secretary, I wasn't here when you gave your opening testimony. I presume that you testified, as it appears on the written statement on page 4, which I will read to you:

> We are offering non-Federal sponsors of potential construction projects the opportunity to provide upfront financing and cost sharing in accord with objectives which the Army has adopted for the fiscal year 1983 budget. The non-Federal financing and cost-sharing objectives which we are proposing for 1983 are, respectively as follows: Deep-draft commercial reduction, 75 percent and 100 percent; hydropower, 100 percent and 100 percent; flood damage reduction, 35 percent and 35 percent; municipal and industrial water supply, 100 percent and 100 percent; and separable recreation, 50 percent and 50 percent.

First of all, I am intrigued by the language. You say you are going to give the States this opportunity, and I am not sure they are going to be enjoying the opportunity.

Mr. GIANELLI. Senator, as I indicated in one of my earlier responses, we have selected 12 projects that were authorized and we have begun to talk to potential project sponsors. I would say at least half of them have come back and expressed some interest, and we are actively working with some of those sponsors now. I am hopeful that it will develop to the point where we can put in a supplemental budget request to get these projects started under the criteria we talked about. I hope you are wrong and that we will get some response from a number of people.

Senator BURDICK. What I am thinking is, How do you go about the complicated process of determining the cost-sharing arrangements on projects that involve interstate or international water and considerations? You may have one project in one State and I think we would have a terribly complicated mess in our hands to really carry this out. It does complicate things.

MINOT, N. DAK.

Now, we heard from the Corps a while ago and we agreed that some construction would go ahead on the water project at Minot, N. Dak., and some construction can start in 1983 with much of the specifications and EIS reports completed by Christmas time. Is there going to be a change in schedule in that project?

Mr. GIANELLI. General Gay can respond to that.

General GAY. Since we met in your office there has been no change in the schedule to prepare the environmental impact statement nor to prepare the phase 2 general design memorandum. Those would both be completed by the end of this calendar year.

Senator BURDICK. What about some construction starting in 1983 as was suggested?

General GAY. That is still a possibility, and in your office I defined "construction" as acquisition of real estate.

Senator BURDICK. In other words, up to this point there has been no change?

General GAY. That is correct, Senator.

Senator BURDICK. But if this recommendation was followed out, I presume the project at Minot, N. Dak., is a flood damage reduction program that is the subject of a 35-percent reduction that would have to be picked up by localities; is that right?

Mr. GIANELLI. As I indicated in my written statement, the percentages that you quoted are only for 1983 and are only an attempt to get something going in the way of a new-start program. If the administration and the Congress come along and enact legislation or adopt different percentages, then, of course, these would be nullified and the new percentages would apply. So it doesn't necessarily follow that the figures we are talking about here will be those, for example, that might be used in subsequent years. I think it depends a lot with what happens between now and then. So I wouldn't want you to assume automatically that the figures that you have quoted from my statement are those that will apply after the year 1983. This is just a 1-year suggestion that we are making.

Senator BURDICK. What is the statutory authority for negotiating such a financial plan after all these projects have already been authorized and under a different assumption?

Mr. GIANELLI. It is a voluntary thing. We made it very clear that these guidelines or rules, percentages, are not the historical ones that have been used and in the light of the funding problem that the administration has, we thought we should offer the opportunity to enter into an arrangement which will allow those projects to proceed earlier. And it is my understanding from counsel that it does not violate the authorization that has been given for these projects.

Senator BURDICK. Wouldn't there have to be some legislation action?

Mr. GIANELLI. The Congress would have to be involved. For example, it would require a supplemental budget request and we have been already informed on the House side when that comes through they intend to get policy advice from the Policy Committee on the House side.

I would expect that when we get these projects formulated a little more clearly we will come directly to the Congress, your committee here, and the Policy Committee on the Senate side, and ask for their blessing to proceed further and, hopefully, that will be forthcoming.

Senator BURDICK. I am not sure they are going to bless those opportunities you are giving them.

Mr. GIANELLI. I would hope, Senator, that you would give us an opportunity to make a presentation to you, not only by the administration, but the project sponsors as well, and you can hear from the both sides as to their desire to proceed.

Senator BURDICK. We certainly will, no question about that.

We have always enjoyed our association in our State with the people that represent the Corps. We have had good relations and we hope to continue them, too.

PREPARED QUESTIONS FOR THE RECORD

As the chairman indicated, there are additional questions for your response. They will be included in the record at this point.

[The questions and answers follow:]

ADMINISTRATION WATER POLICY

Chairman HATFIELD. Mr. Secretary, I am puzzled and concerned after reviewing the 1983 budget for water resource development because of some apparent inconsistencies in the administration national water policy.

No funding requested for national water policy planning. Corps of Engineers budget down 6.1 percent; Bureau of Reclamation budget up 22.8 percent. Major new policy changes on user fees and cost sharing in the Corps budget—no major policy changes proposed for Reclamation budget. Corps construction program down $200 million; Reclamation construction up $118 million.

Would you care to comment on how the administration coordinates and establishes policy for water resource development?

Mr. GIANELLI. The Cabinet Council on Natural Resources is responsible for the formulation of water policy within the administration. The Cabinet Council is served by an ad hoc assistant Secretaries' working group which prepares analyses and makes recommendations on water issues as requested by the Cabinet Council. Preparation of the President's annual budget submission is the responsibility of the Office of Management and Budget. Budget recommendations reflect the status of ongoing projects in the case of the Bureau of Reclamation and the Corps of Engineers.

Chairman HATFIELD. Mr. Secretary, how are you involved in this process? Do you feel that this process affords you an adequate opportunity to provide meaningful input?

Mr. GIANELLI. As Chairman of the Assistant Secretaries' Working Group on Water Resources and as a participant in the deliberations of the Cabinet Council on Natural Resources and Environment whenever water policy is at issue, I believe I have ample opportunity for making my views known on water policy issues.

OPERATION AND MAINTENANCE USER FEE PROPOSAL

Chairman HATFIELD. Mr. Secretary, on the first page of your statement you mentioned the hope that we will be able to work together on bringing about new approaches to financing the Corps' water development program. I thank you for that offer, but I must also point out that it is really without substance, because you and the administration have presented a budget request to the Appropriations Committee which would, through a back-door approach, make major policy changes outside the normal authorization process.

I speak specifically of the financing of normal operation and maintenance requirements through user fees. The budget presented to us has been cut by $150 million on the assumption that user fee legislation will be enacted.

Would you care to comment in more detail on this and why the administration is so optimistic that user fee legislation can be enacted before October 1982 when the Congress has been considering various user fee proposals for about 5 years?

Mr. GIANELLI. I believe that the administration's user charge proposals represent realistic points of departure for the development and enactment by the Congress of cost-recovery legislation for both deep-draft and inland commercial navigation this year. These legislative initiatives are only two of the many, many actions Congress will have to take to put in place an economic program for fiscal year 1983 which addresses today's pressing economic problems.

Chairman HATFIELD. How long do you think it will take to get a consensus and enact user fee legislation?

Mr. GIANELLI. The administration is committed to working with Congress to develop a consensus which will lead to enactment of deep-draft and inland commercial navigation cost recovery this session of Congress.

Chairman HATFIELD. What are the criteria used to identify these so-called low-priority projects?

Mr. GIANELLI. The projects are identified under the following general categories: Category A projects are shallow-draft harbors with project depths of 14 feet or less. No dredging is proposed at these harbors. Category B projects are moderate-volume inland waterways where the average annual commodity flow is 5 to 30 million tons. Reduced hours of lock operation will be provided at these waterways. Category C projects are low-volume waterways where the commercial traffic has been less than 5 million tons per year. Locks on these waterways would be closed and dredging would be deferred. Category D is deep-draft harbors where the maintenance costs are over $1 per ton of commercial traffic. In addition to these categories, we selected work on the Mississippi River and tributaries project which could be deferred with the least impact on the continued functioning of the project features.

Chairman HATFIELD. How, specifically, were the criteria developed? Was there congressional and public input?

Mr. GIANELLI. These criteria were developed primarily by the Corps to identify initially those projects with the lowest priority. There was no congressional or public input as this was done in a very short time frame as part of the budget formulation process. It must be emphasized that these criteria were used as initial screening devices. The Corps district and division offices have been asked to examine these projects to identify cases where it may not be appropriate to reduce or eliminate O. & M. expenditures and to identify other projects which may be low priority even though they do not fall into one of these four categories.

Chairman HATFIELD. Were adverse economic and employment impacts studied? What about increased safety hazards and danger to life and property? Do you plan any studies?

Mr. GIANELLI. None of these factors were considered in developing the preliminary list of projects to be impacted by the $150 million O. & M. reduction. I would expect, however, that such factors would be part of the district and division engineers' considerations when modifications to the preliminary list are recommended.

Chairman HATFIELD. I also understand that there is a list of those projects identified for elimination or reduction in O. & M. work based on the criteria developed by the Department of the Army and the administration. Are you familiar with that list and does it include all of those projects that fall into one of the four criteria?

Mr. GIANELLI. The intention was that all of the projects that fall into one of the four categories be included on the list. However, I understand that a few projects were inadvertently left out while, on the other hand, a few other projects which should not have been included were inadvertently placed on the list. In any event, the Corps of Engineers is now reviewing the list with the intention of eliminating such errors.

Chairman HATFIELD. Have there been any changes to that list since the budget was submitted to Congress and, if so, what are those changes and what were the criteria and basis for those changes?

Mr. GIANELLI. As I mentioned, the Corps of Engineers is now working through its field offices to refine the list. The objective of the review will be to assure that the O. & M. reductions totaling $150 million are taken on the projects which are truly of lowest priority. Accordingly, we can expect that a number of subjective factors, as well as conditions which are unique to each individual project, will be considered by the division and district engineers who are now reviewing the list.

Chairman HATFIELD. If a review shows an adverse impact as a result of this action, will that project be withdrawn from the list and another added? What makes you think that a more marginal project will be found to replace any project removed?

Mr. GIANELLI. We would expect there to be adverse impacts associated with every one of the reductions in O. & M. Our objective will be to identify that group of projects producing the least number of benefits so that we can concentrate our reductions on them and thus minimize the adverse economic impacts of our reductions.

INLAND WATERWAY TRUST FUND

Chairman HATFIELD. Now, as I understand, the fees collected will go into the inland waterway trust fund. What is the administration's proposal on the use of those funds to meet O. & M. requirements? Would there have to be a subsequent authorization to appropriate from the trust fund?

Mr. GIANELLI. The administration has proposed that the trust fund would be a source for funding both future O. & M. and future capital expenditures on the inland waterways. Appropriations from the trust fund could be made for any authorized inland waterway project. In the case of deep-draft ports, no trust fund arrangement has been proposed by the administration.

Each year we would expect the budget to identify an estimated amount of funds to be drawn from the trust fund as a source of revenue for carrying out our navigation operation and maintenance and construction activities. This is covered in the administration's proposal and would alleviate the present problem of not being able to spend fuel tax collections presently in the inland waterway trust fund.

NEW CONSTRUCTION START POLICY

Chairman HATFIELD. As with the O. & M. policy change, the Appropriations Committee is being asked to approve a new construction start policy for water resource development formulated solely within the Department of the Army and the administration. Congress has had no input in the development of your criteria and has not enacted legislation which would change the traditional requirements for cost sharing on currently authorized projects. What actions is the administration taking to bring about new investment in water resource development?

Mr. GIANELLI. In the Department of the Army, we are making a strong effort to bring a total of at least 12 projects to construction in fiscal year 1983 by a combination of Federal and non-Federal capital investment. This voluntary program constitutes a total investment of about $1.6 billion during the next 5 or 6 years, if all projects were agreed to.

Chairman HATFIELD. More specifically, what are the administration's objectives, by major project purpose, for the percentage of Federal and non-Federal participation? Why do the percentages differ? Why, for example, is there a greater national or Federal interest in recreation than hydropower or commercial navigation?

Mr. GIANELLI. Our objectives for 1 year only in 1983, in terms of upfront financing, will be supplied for the record.

[The information follows:]

[In percent]

	Federal	Non-Federal
Commercial navigation	[1] 25	75
Hydropower		100
Municipal water suply		100
Flood protection	65	35
Recreation	50	50

[1] Reimbursable over long term.

Mr. GIANELLI. The percentages differ because they are intended to reflect relative vendibility of outputs, based on the following rationale:

One. Hydropower—A good hydropower project is highly vendible and highly financible. Nearly all electric power projects are locally financed now, throughout the whole country.

Two. M. & I. water supply—Same as above. The Federal Government supplies only a very small part of the nationwide supply of M. & I. water—and also of electric energy.

Three. Flood damage reduction—Unlike power and M. & I. water supply, flood damage reduction is not vendible. In addition, it has public health and safety considerations, somewhat analogous to EPA's programs. The 35 percent represents about a doubling of historical average local cost sharing and is a major step toward the principle that beneficiaries should pay more, but it is not an unreasonably drastic change.

Four. Separable recreation—Here, the percentage is the same as in the past; we have made no change except to require the non-Federal share to be paid upfront. Since it is applied only in multipurpose projects, we feel that the other functional percentages are sufficient.

Five. Commercial navigation—The 100 percent local cost sharing is in accord with administration policy already expressed. The 75 percent non-Federal financing represents our own estimate of what would be acceptable under the circumstances, recognizing that there is a Federal interest.

Chairman HATFIELD. Why doesn't this policy favor major industrial regions and those States with large financial and technical resources?

Mr. GIANELLI. This question occurred to us, too, during formulation of our new starts program, but it is being proposed only for 1983. However, we saw no significant problem in that area so far as any of the specific projects in our program are concerned. In general, it seems to us that where a project does indeed produce real benefits, there will be an incentive and an ability to cost share. The rationale for our policy may be best shown by an example. A municipal and industrial water supply project produces savings in the cost of making available additional supplies of water to accommodate future economic growth. These national economic development benefits which are reflected in the project benefit-cost ratio will be enjoyed by the water users in the benefiting region. Under traditional approaches, the Federal Government financed the project costs and then was repayed by the beneficiaries over time. Under innovative financing, the regional beneficiaries agree to finance the project as it is constructed rather than to repay the Federal Government over time. The non-Federal sponsor is free to raise the necessary funds any way it wishes but the projected benefits of the project provide a basis for the sale of revenue bonds to provide the necessary non-Federal capital to fund the project. It might be noted that it is the saleable benefits of the project, not the wealth of the region, that provides the basis for non-Federal funding of the project so that, in the case of projects producing vendible outputs such as water supply, navigation, and hydropower, it cannot be said that our policy favors the more prosperous regions.

Chairman HATFIELD. Could you tell this committee what specific authority allows you to negotiate these innovative financing arrangements on currently authorized projects, particularly when the Congress has considered these projects and approved different cost-sharing provisions?

Mr. GIANELLI. The Chief Counsel of the Corps of Engineers has determined that there is nothing in law which would preclude these cost-sharing proposals. The specific requirements of local cooperation specified for projects in their authorizing documents are viewed as minimum thresholds for non-Federal participation. Since the cost-sharing and financing proposals exceed the minimum thresholds, it would appear that the project authorizations do not pose any legal problem. This is on a voluntary basis and really is not an increase in all cases. For example, water supply, hydroelectric power, and recreation are in accordance with existing law. However, we are asking that locals pay during construction rather than repay over the life of the project which is perfectly permissible under existing law. Flood control, for which we are asking 35 percent cost sharing, may well be higher than the cost of land, easements, and rights-of-way on a local protection project. Therefore, it is important to stress the voluntary nature of the additional non-Federal contribution.

For navigation projects, which are probably the biggest change of all in terms of ultimate cost, the proposal generally is consistent with the legislation submitted by the administration last year, but admittedly not enacted into law. Here, too, we are counting on voluntary contributions to finance the non-Federal share consistent with the administration's proposal and we would hope that Congress would enact such legislation in the second session of the 92d Congress.

Chairman HATFIELD. What are the criteria being used in determining if a project meets the administration's requirements for a new construction start?

Mr. GIANELLI. In general, a favorable benefit-cost ratio, no serious environmental problems, and high-priority economic development outputs such as water supply, hydropower, flood control, and commercial navigation, and the project should be authorized. In addition, local interests must be willing to meet our financing and cost-sharing proposals. Keep in mind that projects being considered for new construction starts generally were authorized a number of years ago, the planning of these projects was accomplished generally under older guidelines rather than the latest ones being developed by the administration.

Chairman HATFIELD. The administration has continually made the point that it supports new construction starts and that $48 million has been included in the budget for 1983 to begin new projects. I have had trouble identifying and locating this contingency fund of $48 million for new water projects. Could you tell this committee, specifically, where in the President's budget these funds are included and requested?

Mr. GIANELLI. The President's budget does not identify any specific project that would go to construction in fiscal year 1983 and no funds for new starts are included in the Army's request for the civil works program.

There was an apparent disagreement between the Budget Appendix, page I-H3, which indicated that the reserve for contingencies includes an amount for initiation of construction of new Corps water resources projects to be identified later, and the regular Budget book which indicates on page 5-51, that after consultation with local project sponsors the administration would request funds to initiate construction of new projects. The latter is correct. There are no funds for new construction starts in the contingency fund.

Chairman HATFIELD. What would be the procedures the administration would use to request initiation and funding of new construction starts?

Mr. GIANELLI. We will submit a request to OMB on about April 1 for an amendment to the President's budget covering the Federal construction funds required in 1983 for all projects for which we have obtained agreement with the local sponsors.

Chairman HATFIELD. Mr. Secretary, your statement includes a list of those projects under consideration for new construction starts. Haven't most of those projects been ready for construction and under review as potential new starts for several years?

Mr. GIANELLI. Yes.

Chairman HATFIELD. How many non-Federal sponsors have agreed to the administration's proposals for cost sharing and provided letters of intent to provide upfront financing?

Mr. GIANELLI. As of March 12, 1982, no non-Federal sponsors have furnished letters of intent to provide upfront financing for 1983 construction new starts. We do, however, expect to have some in the near future.

Chairman HATFIELD. What projects on this list are most likely to be proposed as new starts?

Mr. GIANELLI. It is too early to say specifically, except for the Merced, Calif., flood control project, which is 100-percent accepted. The most likely types of projects are probably two to three additional flood control projects and one hydropower project. A port project is possible, as are a multipurpose project, another hydro project.

Chairman HATFIELD. Please provide for the record all pertinent correspondence, letters of intent, and copies of draft agreements on all of those projects under active cosideration as new starts.

Mr. GIANELLI. Copies of the material we have in hand at this time will be provided.

[The information follows:]

Letter From Keith Parks, General Manager-Secretary, Eugene (Oreg.) Municipal Utilities

February 3, 1982

Mr. William R. Gianelli
Assistant Secretary of the
Army (Civil Works)
Department of the Army
Office of the Assistant-Secretary
Washington, D.C. 20310

Dear Mr. Gianelli:

This letter is to confirm our interest in discussing further the possibility of the Eugene Water & Electric Board entering into a partnership with the U.S. Corps of Engineers on its Strube Lake and Cougar Power Project located near our existing upper McKenzie River hydro facilities in Oregon.

I am sure you are aware that the Eugene Water & Electric Board is a municipal utility, and that we have, for many years, been interested in cooperating with the federal agencies. It is our hope that you will be able to resolve some of the problems that have arisen due to policy changes you are making, so that we can begin work on the resolution of our problems.

I enjoyed visiting with Mr. Eiland and Col. Connell and his staff from the Portland office. Thank you for your kind consideration.

Sincerely,

Keith Parks
General Manager-Secretary

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

Mr. Keith Parks
General Manager-Secretary
Eugene Water & Electric Board
500 East 4th Avenue - P.O.
Box 10148
Eugene, Oregon 97440

Dear Mr. Parks:

Thank you for your letter of February 3, 1982, expressing interest in further discussions regarding the Strube Lake Hydroelectric Project in Oregon.

I am aware of the problems you identified in the meeting of January 14th in your office; we are taking steps to address them. We will arrange another meeting with you as soon as it is practicable. Our objective is to move this good project to construction as soon as possible, on the basis of non-Federal financing.

I appreciate very much your friendly reception of my staff at the recent meeting, as well as the practical aspects you identified.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Letter From David Katz, President, Reclamation Board, California Department of Water Resources

February 11, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
Department of the Army
Washington, D. C. 20310

Dear Mr. Gianelli:

With reference to your letter of January 8, 1982, I met with Mr. Robert L. Eiland of your staff and Sacramento District Engineer, Colonel Paul F. Kavanaugh and his staff on February 3 regarding the Merced County Streams Project. Mr. Eiland and Colonel Kavanaugh explained your proposal to include this project in your program for new construction starts in 1983, provided that financial arrangements can be worked out.

Mr. Eiland indicated that your tentative proposal, in order to move forward with some of the better flood control projects, was to cost share on a 65 percent Federal and 35 percent non-Federal basis. He also indicated that any project financial package we put together would require approval of the Office of Management and Budget and by the Congress.

We believe that the recent agreement to reduce the scope of this project by deferring the enlargement of Burns Dam will make the project more cost-effective and will resolve the problem of destroying the vernal pools in that reservoir area.

The Reclamation Board continues to support the Merced County Streams Project and intends to provide, subject to reauthorization and appropriation of funds by the Legislature, the necessary assurances of local cooperation for the flood control aspects of the project, in accordance with the above-noted percentages.

I am looking forward to working with you and your staff to complete this important flood control project.

Sincerely,

David Katz

DAVID KATZ,
President

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

Mr. David Katz
President
Department of Water Resources
The Reclamation Board
1416-9th Street, Room 335-18
Sacramento, California 95814

Dear Mr. Katz:

Thank you very much for your letter of February 11th, regarding the Merced County Streams Project. I am extremely pleased that the State Reclamation Board accepts our offer to move the project as a new construction start in Fiscal Year 1983 on the basis of 35 percent non-Federal financing and 65 percent Federal financing.

I am advised that a similar letter is in the mail from the Merced County Board of Supervisors. Immediately on receipt of such a letter, Colonel Kavanaugh will contact you and the County to draw up an exchange of letters that will provide the basis for our submission of a budget amendment to OMB. I anticipate no difficulty at all in preparing such letters, in view of the unqualified support you have expressed.

Let me also thank you and Elden Rinehart for your willingness to meet with us on this matter and to consider our proposal seriously and promptly.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Letter From Robert F. Flacke, New York State Department of Environmental Conservation

JAN 18 1982

Dear Mr. Gianelli:

Thank you for your letter of January 4, 1982 and the opportunity to meet with Mr. Eiland of your personal staff and Colonel Johnson and Mr. Nicaise of the Corps of Engineers relative to the Dansville Flood Control Project.

The Dansville project is important to the needs of the residents of the town of North Dansville and I concur with you that it is a good project and would like to see construction started as soon as possible. I cannot, however, accept your offer of administration support for project funding with the provision that the State provide an up-front cash advance of 35 percent of the total cost. Cost sharing of water projects is a matter of law established by the Congress. Until Congress acts to change the traditional cost sharing through their normal process of hearing and committee actions I am constrained from offering State funding in addition to that specifically required by law. Also, from a pragmatic viewpoint, the increased competition for dwindling State resources as a result of Federal cut-backs in many areas makes it difficult to justify increased spending for any project.

New York State has enjoyed a fine relationship with the Corps of Engineers for more than 40 years as a partner in the construction of many flood protection projects. Our long term average share of costs associated with construction of these projects approaches 25 percent. In addition, our annual operation and maintenance costs, exclusive of project rehabilitation, is in excess of $2 million each year. In short, our total annualized cost for flood protection is already burdensome. Absorbing additional cost will be very difficult.

Again, I appreciate the efforts of your office in attempting to move this important project. We must, however, continue to work with the Congress to move this and other projects under traditional cost sharing procedures.

Sincerely,

Robert F. Flacke

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Robert F. Flacke
Commissioner
New York State Department
of Environmental Conservation
Albany, New York 12233

Dear Mr. Flacke:

Thank you for your letter of January 18th regarding the financing of the Dansville Flood Control Project in New York.

I regret that our offer to support a start of construction in Fiscal Year 1983 on the basis of 65% Federal financing and 35% local financing is not acceptable to you. On the other hand, I certainly do understand the basis for your decision to pursue the funding of the project under the traditional arrangements for cost-sharing of Federal projects.

In any case, I appreciate your meeting with us, and I thank you for the courteous reception you afforded my staff.

Sincerely,

Signed

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

5 MAR 1982

Mr. Robert F. Flacke
Commissioner
New York State Department of
Environmental Conservation
Albany, New York 12233

Dear Mr. Flacke:

As you know, we are engaged in a program for new construction starts of projects of the Corps of Engineers in Fiscal Year 1983, under certain proposals for their financing. It may be possible to include the Ellicott Creek Flood Control Project in the new starts package we plan to submit to the Office of Management and Budget about April 1. Although the project was not considered ready to go to construction when we developed our list of candidates during the budget process last fall, it is ready now. Consequently, I want to offer the State the same opportunity we offered the Dansville Project.

Our offer remains the same, namely, that actual costs allocated for flood control would be financed 65 percent Federal and 35 percent non-Federal (or lands, easements, rights-of-way, and relocations, whichever is greater). Costs allocated to recreation would be financed 50-50, as in the past.

In the event the State wishes to proceed along these lines, we will need a letter of intent to that effect prior to April 1. Colonel George P. Johnson, Buffalo District Engineer, can advise you on this matter.

Sincerely,

W R Gianelli

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM GOV. JOSEPH E. BRENNAN OF MAINE

January 29, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
(Civil Works)
Department of the Army
The Pentagon
Washington, D.C. 20310

Dear Mr. Gianelli:

Officials from Maine Department of Transportion, Department of Marine Resources, State Planning Office and Congressional delegation have met with Mr. R. G. Eiland of your staff and Colonel Edgar of the New England Division of the Army Corps of Engineers concerning the Jonesport Harbor Project. It was the consensus of all those attending the meeting that the project is a good one and should be pursued.

However, due to the new cost-sharing proposals which apply to the project, we will have to meet with officials of Jonesport and other concerned parties before the State of Maine can make the firm decision to proceed.

Here in Maine, we have just embarked on several ambitious Port and Fisheries development programs. The decision to add the Jonesport breakwater to the list must undergo careful consideration before we proceed further.

I appreciate your interest in the project and sincerely hope we can work towards its future completion.

Sincerely,

Joseph E Brennan

JOSEPH E. BRENNAN
Governor

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Honorable Joseph E. Brennan
Governor of Maine
Augusta, Maine 04333

Dear Governor Brennan:

Thank you very much for your letter of January 29th regarding the financing of the Jonesport Harbor Project of the Corps of Engineers.

I certainly understand that, before any firm decision can be made, the State will need to give careful consideration to the question of proceeding with the project under the financial arrangements that we proposed in the meeting of January 8th. In this regard, the Corps of Engineers is ready to assist in any way possible.

I especially appreciate the State's willingness to meet with us, and the courteous attention with which your State officials received my staff.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM GOV. JAY S. HAMMOND OF ALASKA

January 19, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
Office of the Assistant Secretary
U.S. Department of the Army
Washington, D.C. 20310

Dear Mr. Gianelli:

Thank you for your letter of January 4, 1982, describing your new approach for funding Corps of Engineers projects in Alaska.

Perhaps your new approach has merit for certain Alaska projects. The Corps of Engineers has a good record in Alaska, and it would be unfortunate if that capability was lost to us. We do have the competitive factor to assess, so if we put up all the money, we would have to examine each project to insure that there are unusual advantages to staying with the Corps rather than doing it ourselves with the private sector.

As to the specific projects you mention, we will begin the work necessary to enter into an agreement with the Corps of Engineers on Bradley Lake while we continue with our investigations as to the benefits of such an arrangement.

With reference to the Kake Harbor project, we have already begun an interim project, hoping to provide some additional moorage facilities while awaiting federal funds that we expected in Fiscal Year 1985.

We have passed our budget program cycle for Fiscal Year 1983, and the interim money would not make a significant contribution toward the main project; therefore, we would not expect to have State funding until Fiscal Year 1985.

Sincerely,

Jay S. Hammond
Governor

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

Honorable Jay S. Hammond
Governor of Alaska
Juneau, Alaska 99801

Dear Governor Hammond:

I very much appreciate your letter of January 19th responding to our proposals for the financing of the Bradley Lake and Kake Harbor Projects.

The Corps of Engineers will cooperate fully with the State in the work necessary for an agreement providing for State financing and Corps construction, with the understanding that the State will, at the same time, be considering the alternative of handling the project itself with the private sector. With regard to the Kake Harbor project, we understand that the State wishes to defer the project until after 1983; such deferment is quite agreeable to us.

I do appreciate your staff's meeting with us and the courteous reception they offered.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM JOHN A. FALCON, ACTING EXECUTIVE DIRECTOR, PORTS AUTHORITY, COMMONWEALTH OF PUERTO RICO

February 5, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
Department of the Army
The Pentagon
Washington, D. C. 20301

Dear Mr. Gianelli:

The Ponce Harbor Improvement Project was amply discussed with Colonels Alfred Deveraux and William Burns and Mr. Stan Rosen representing the U. S. Army Corps of Engineers and Mr. Robert G. Eiland of your office during a meeting held at the Puerto Rico Ports Authority (PRPA) on January 20, 1982.

Local interests were represented by Mayor José G. Tormos and Mr. Enrique Petrovich of the Municipality of Ponce, Messrs. Walter J. Dávila and Frederick E. Rushford of the Office of the Governor, Mr. José L. Ortiz from the P.R. Office of Budget and Management, and Engrs. Dávila, Espada, Torres, and the undersigned in representation of the Puerto Rico Ports Authority.

After a thorough discussion of the project and the cost-sharing proposal presented for consideration by Mr. Eiland; it was concluded that, presently, neither the Municipality of Ponce or the Government of Puerto Rico are in the position to provide the required funding nor have access to the long term financing for the project, which was estimated at some $6.4 million (non-federal share).

With a view towards making the project viable the Mayor of Ponce indicated that should long-term financing of the project at an acceptable rate of interest be available through a loan from external sources, the Municipality would be in a position to consider committing itself to a long range loan repayment plan.

Since the Ponce Harbor Improvement Project has the highest Benefit: Cost Ratio (8:1) of the 13 projects selected; it is felt that construction should benefit to the economy of Southern Puerto Rico. The current economic conditions including an unemployment rate of 21.6% are such, that a project of this nature must be recognized for its direct contribution to strengthening the economy through improved efficiency of a key port facility. Puerto Rico is a vital part of the United States in the Caribbean, and improving the port of Ponce would also enhance our National defense posture. In summary I wish to stress the need to consider local variations in the United States and the great contribution this project would make to the local economy.

This matter will be forwarded by Governor Carlos Romero-Barceló to the attention of the White House Task Force on Puerto Rico designated by President Ronald R. Reagan to coordinate Federal support to the development of the Puerto Rican economy. In the meanwhile, we request the processing of administrative matters to secure Federal funding for the Ponce Harbor project be continued on the basis of traditional administrative procedures, unless, as previously indicated, a source for long term financing for project execution is identified and a loan repayment plan acceptable to the Municipality is instituted.

Cordially,

John A. Falcón
Acting Executive Director

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. John A. Falcón
Acting Executive Director
Ports Authority
G.P.O. Box 2829
San Juan, Puerto Rico 00936

Dear Mr. Falcón:

Thank you for your letter of February 5th, regarding our proposal for financing the Ponce Harbor Project as a new construction start in 1983.

I am sorry that you are not able at this time to provide the up-front financing that we are seeking on all port projects, but I do understand very well your situation and also your reasons for requesting that Federal funding be provided on the basis of the traditional arrangements of past years. While I must regretfully advise that we are not in a position to accede to that request, I want to assure you that we will certainly keep the project current, in the event that some method of financing may develop in the coming months. I am asking the Corps of Engineers to keep in contact with you.

Finally, I want to express my appreciation to you, and to all the other gentlemen who attended the meeting in San Juan on January 20th, for the friendly and courteous reception that you afforded my staff.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM JOSEPH W. GRIMSLEY, SECRETARY, NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

January 19, 1982

Mr. William R. Gianelli
Assistant Secretary for the Army
Department of the Army
Washington, D. C. 20310

Dear Mr. Gianelli:

Thank you very much for your letter of January 4, 1982, and for the personal visit by Mr. R. G. Eiland of your staff concerning the new financing and cost sharing policies that you are proposing for the Randleman Lake Project.

Your proposals call for a revolutionary change in the role of the federal government in water resources development. Adapting to a change of this type will be a major challenge for state and local governments. We will be reviewing your proposals and consulting with the local governments interested in the Randleman Lake Project. We hope to provide you a timely reply on the direction that we will take in responding to your proposed policy changes.

We very much appreciate being informed of this proposed change in policy and having the opportunity to consider participating under the new policies. Thank you also for providing us the personal briefing by Mr. R. G. Eiland. Mr. Eiland gave us a very clear and candid explanation of your new policies and greatly helped us to understand what their implications would be.

With best personal regards.

Sincerely,

Joseph W. Grimsley

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

Mr. Joseph W. Grimsley
Secretary
North Carolina Department of
Natural Resources and Community Development
P. O. Box 27687
Raleigh, North Carolina 27611

Dear Mr. Grimsley:

Thank you very much for your letter of January 19th regarding the financing of the Randleman Lake Project of the Corps of Engineers.

I am pleased to know that the State will review our proposal and give consideration to it. Please call on the Corps of Engineers to assist you in any way possible. Finally, I am most appreciative of your willingness to meet with us and especially of the courteous reception you afforded my staff.

Sincerely,

(Signed)

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM JOSEPH W. GRIMSLEY, SECRETARY, NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

February 10, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
Department of the Army
Washington, D. C. 20310

Dear Mr. Gianelli:

Mr. R. G. Eiland of your staff visited us in January to propose a new policy on non-federal cost sharing and financing for the Randleman Lake Project. This new policy would require a 35 percent non-federal contribution to the flood control purpose as opposed to no non-federal cost for flood control under current statutes. The policy would also require all non-federal water supply and recreation costs to be concurrent with project construction rather than repaid to the federal government over a 50-year period.

Local governments in the project area have counted on the Randleman Lake for a number of years to meet their water supply needs in the 1990's and beyond. Just after the meeting with Mr. Eiland, we immediately got in touch with local governments concerned about the project to explain your new proposed terms. After a follow-up meeting and further discussion by these local governments, we have reached a conclusion that the State of North Carolina and the interested local governments are not at this time able to accept your proposals for additional non-federal financing and cost sharing.

Providing a long range water supply for this area remains a top priority for our Department. The local governments in the project area, with the assistance of the Piedmont Triad Council of Governments and of our Department, will be carefully analyzing their alternatives for providing this needed water supply. We will be considering other reservoir sites in the area as well as other approaches to the funding of the Randleman Project or a redesigned project at the Randleman site. We are open to consideration of a variety of combinations of federal and non-federal cost sharing and financing.

We very much appreciate Mr. Eiland's willingness to come and explain your proposal to us in person. We continue to have a strong interest in the Randleman Lake Project and will stay in close touch with the Wilmington District of the Corps of Engineers on the status of the project.

With best personal regards.

Sincerely yours,

Joseph W. Grimsley

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Joseph W. Grimsley
Secretary
North Carolina Department of
Natural Resources & Community Development
P. O. Box 27687
Raleigh, North Carolina 27611

Dear Mr. Grimsley:

I have your letter of February 10th regarding the Randleman Lake Project, and I acknowledge and understand your conclusion that the State and local governments are not able to accept our financing proposals at this time.

We will certainly keep this good project in a state of readiness, and the Corps of Engineers will assist you in every possible way in your further consideration of alternatives and options. My own office will keep abreast of developments, and we will look forward to another meeting whenever it is timely and appropriate. We certainly retain an interest in the project, as you do.

Your serious attention to our proposal is very much appreciated, indeed.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM ROBERT J. MULREADY, CITY ADMINISTRATOR, DAVENPORT, IOWA

February 16, 1982

William R. Gianelli
Assistant Secretary of the Army, Civil Works
Office of the Assistant Secretary
Department of the Army
Washington, D.C. 20310

Dear Secretary Gianelli:

This is to advise you that I have reviewed the revised proposal for funding contained in your letter of 01/04/82 and believe that the Davenport Flood Control Project is of such importance that the issue should be pursued. I will be presenting the revised funding proposal to the City Council in the near future, and it is my hope that they will support my position in favor of the Davenport Flood Control Project.

Sincerely,

Robert J. Mulready

Robert J. Mulready
City Administrator

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Robert J. Hulready
City Administrator
City Hall
226 West 4th Street
Davenport, Iowa 52801

Dear Mr. Mulready:

Thank you very much for your letter of February 16th regarding the Davenport Flood Control Project.

I am pleased, indeed, to know that you will present our proposal for financing the project to the City Council with a favorable recommendation. Please advise us as to the Council's decision.

Finally, I would like to express my appreciation for the courteous attention that your staff provided at the meeting on January 22nd in Rock Island.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM AL BARDINI, CHAIRMAN, MERCED COUNTY (CALIF.) BOARD OF SUPERVISORS

February 9, 1982

Honorable William R. Gianelli
Assistant Secretary (Civil Works)
Department of the Army
The Pentagon, Room 2E570
Washington, D.C. 20310

Dear Mr. Secretary:

Following receipt of your letter of January 8, 1982, representatives of the County of Merced met with Mr. Robert Eiland of your staff to discuss your cost-sharing concepts as they relate to the Merced County Stream Group Project.

Today the Merced County Board of Supervisors reaffirmed its support of this project.

It is our intention to continue to work with the State of California, the U.S. Corps of Engineers and other affected agencies in an effort to meet the financial requirements outlined by Mr. Eiland. It is the intent that Merced County's share of local costs will be obtained through some type of benefit-assessment yet to be established.

In further discussions with the Federal Government as to the allocation of Federal-local costs, we encourage consideration of the importance of flood control protection which this project offers to Castle Air Force Base and its personnel, many of whom reside in the area to be protected. We believe that the Strategic Air Commands defense mission will be enhanced by early completion of the Merced County Streams Group Project.

Sincerely,

Al Bardini
Al Bardini, Chairman
Merced County Board of Supervisors

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

Mr. Al Bardini
Chairman, Merced County
  Board of Supervisors
2222 M Street
County Administration Building
Merced, California 95340

Dear Mr. Bardini:

I have your letter of February 9, 1982, and I very much appreciate your positive response to our proposal for financing the Merced Streams Flood Control Project. We have just received a similar commitment from the State Reclamation Board.

As indicated, we will be preparing budget amendments and will be recommending to OMB that construction of this project begin in FY 83.

I note your point regarding the benefits of the project to the Castle Air Force Base. We will review that matter as you suggest.

Finally, I do appreciate the serious and courteous attention that you and all of the other people from Merced gave us at the meeting in Sacramento on February 3rd.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM CALIFORNIA STATE RECLAMATION BOARD

Dear Mr. Gianelli:

This constitutes a letter of intent by the California State Reclamation Board to cooperate with the Federal Government to begin construction of the Merced County Streams Project in California in Fiscal Year 1983 under the following financing and cost-sharing provisions:

1. The State Reclamation Board will provide during the period of project construction the entire costs of lands, easements and rights of way necessary for construction of the Project channel improvements and necessary relocations and alterations to existing improvements including highway facilities, which may be required for construction of the channel works or 35% of the total project construction costs, whichever is greater. Such total construction costs shall not include recreation development costs, which are to be cost shared in accordance with Public Law 89-72. The Board recognizes that the provision of lands, easements and rights-of-way, as well as necessary relocations in connection with the levee and channel work is a non-Federal responsibility and will bear the full costs thereof, even if it exceeds 35% of the Project's total construction costs.

The project to be constructed at this time is that generally described in the Phase I General Design Memorandum (March 1980, as approved by the Office of Chief of Engineers on 3 February 1982), modified to defer the construction of the Burns Creek Dam and Reservoir Enlargement. The cost of the Project at price levels of October 1981, is estimated by the Corps of Engineers to be $_______, and the estimated schedule of Federal and non-Federal expenditures during the construction period is as follows:

		Expenditures	
Year	Federal	Non-Federal	Total
1983			
1984			
Etc.			

It is understood, also, that:

1. Operation and Maintenance of the completed project, dams and reservoirs excepted, will be a non-Federal responsibility.

2. Prior to the start of construction, execution of a Section 221 Agreement (Section 221, Public Law 91-611) will be required. That Agreement will reflect the cost-sharing provisions specified above as well as other items of local cooperation provided for in the Report of the Chief of Engineers, dated November 25, 1970.

The State Reclamation Board is, by law, the agency empowered to provide the non-Federal cooperation, assurances, and financing required by the Federal Government for flood control projects in its area of jurisdiction, which includes the Merced Project. The division of costs between the State and the Merced County Board of Supervisors, which is the project sponsor, will be determined by the Board in accord with State law. The Merced County Board of Supervisors has confirmed that it wishes to proceed with the project in accordance with the arrangements described above.

The State Reclamation Board will seek funds for the Project in the State's budget. The Merced County Board of Supervisors will provide its share of non-Federal funds from its own tax revenues, including a special zone-of-benefit tax, for which it is seeking legal authority to levy.

Finally, it is understood that the Assistant Secretary of the Army for Civil Works will recommend to OMB that a supplemental budget request for ~~seek~~ funds in the President's budget for Fiscal Year 1983 for initiation of construction in that year, and that he will request funds in succeeding years, recognizing Board contributions, sufficient to support efficient, economical, and prompt completion of construction.

If this letter reflects your understanding, I would appreciate receiving a counter-signed copy.

Sincerely,

Executive Officer

STATEMENT OF WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Mr. Giles G. Dodd
City Manager
Municipal Center
Virginia Beach, Virginia 23456

Dear Mr. Dodd:

As you may be aware, we are engaged in a program for new construction starts of projects of the Corps of Engineers in Fiscal Year 1983, under certain proposals for their financing. It may be possible to include the Virginia Beach Streams Flood Control Project in the package we plan to submit to the Office of Management and Budget about April 1st. Although the project was not considered ready to go to construction when we developed our list of candidates during the budget process last fall, it is ready now. Consequently, I want to offer the City the opportunity to participate in our new starts program, if it wishes to do so.

Our program is based on budget exigencies that make the availability of Federal funds for discretionary programs, including water projects severely limited at best, and also on the general policy of the Administration that a higher degree of non-Federal cost-sharing and financing is both desirable and necessary to put the water project program on a sound basis.

For all flood control projects, we would budget to finance 65% of the total project cost. We are asking the non-Federal sponsors to finance 35% or rights-of-way and relocations, whichever is greater. Annual construction expenditures would be divided generally in those proportions.

It is fully recognized that our proposals are not in accord with traditional and established cost-sharing policies, and that any project financial package we may put together and recommend will have to be specifically reviewed and approved by the Office of Management and Budget and by the Congress. It is believed, however, that the plan does provide a practical basis for moving ahead with good water projects in 1983. Of course, we fully understand that you will want to weigh the advantages and disadvantages in your own situation, as well as all the options open to you. Whether or not you will wish to proceed with us is entirely at your own option. In any case, I want to offer what I believe is the best opportunity to move forward, and I hope you will understand the practical reasons for this new initiative.

In the event the City wishes to proceed along these lines, we will need a letter of intent to that effect prior to April 1st. Colonel R. E. Hudson, Norfolk District Engineer, can advise you on this matter.

Finally, if you would like to have more information on our program, Mr. Robert G. Eiland, my Special Assistant, will be glad to meet with you in Virginia Beach. His telephone number is (202) 697-7084.

Sincerely,

WRGianelli
William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

STATEMENT OF WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Honorable Hannibal Tavares
Mayor, County of Maui
Wailuku, Maui, Hawaii 96793

Dear Mayor Tavares:

As you may be aware, we are engaged in a program for new construction starts of projects of the Corps of Engineers in Fiscal Year 1983, under certain proposals for their financing. It may be possible to include the Kahoma Stream Flood Control Project in the package we plan to submit to the Office of Management and Budget about April 1st. Although the project was not considered ready to go to construction when we developed our list of candidates during the budget process last fall, it is ready now. Consequently, I want to offer the City the opportunity to participate in our new starts program, if it wishes to do so. I understand that you and Lieutenant Colonel Sprague have already discussed the matter, and that you are interested in our proposal.

Our program is based on budget exigencies that make the availability of Federal funds for discretionary programs, including water projects severely limited at best, and also on the general policy of the Administration that a higher degree of non-Federal cost-sharing and financing is both desirable and necessary to put the water project program on a sound basis.

For all flood control projects, we would budget to finance 65% of the total project cost. We are asking the non-Federal sponsors to finance 35% or rights-of-way and relocations, whichever is greater. Annual construction expenditures would be divided generally in those proportions.

It is fully recognized that our proposals are not in accord with traditional and established cost-sharing policies, and that any project financial package we may put together and recommend will have to be specifically reviewed and approved by the Office of Management and Budget and by the Congress. It is believed, however, that the plan does provide a practical basis for moving ahead with good water projects in 1983. Of course, we fully understand that you will want to weigh the advantages and disadvantages in your own situation, as well as all the options open to you. Whether or not you will wish to proceed with us is entirely at your own option. In any case, I want to offer what I believe is the best opportunity to move forward, and I hope you will understand the practical reasons for this new initiative.

In the event the City wishes to proceed along these lines, we will need a letter of intent to that effect prior to April 1st. Lieutenant Colonel Sprague can advise you on this matter.

Sincerely,

WRGianelli
William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

LETTER FROM ROBERT F. HART, CHAIRMAN, LIVINGSTON COUNTY, (N.Y.) BOARD OF SUPERVISORS

January 26, 1982

Mr. William P. Gianelli
Assistant Secretary of the Army (Civil Works)
Department of the Army
Washington, D.C. 20310

Dear Mr. Gianelli,

It has come to my attention that the Dansville Flood Control Project could possibly become a reality in 1983 providing the State of New York agrees to assuming an increased percentage of the total cost.

With the budget demands facing the state it appears that there exists a considerable reluctance on their part to assume a revised formula of cost sharing for this project.

I respectfully request the consideration of your office in approving this project based on percentage formulas applied at the inception of the project planning.

Very truly yours,

ROBERT F. HART, Chairman

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

February 10, 1982

Mr. Robert F. Hart
Chairman, Board of Supervisors
Livingston County
Geneseo, New York 14454

Dear Mr. Hart:

This is in reply to your letter of January 26, 1982, regarding the Dansville Flood Control Project.

I certainly do understand your request that this very good project be financed by the Federal Government under the traditional arrangements. However, the project is one of a dozen or so throughout the country that we are attempting to move to construction in 1983 under arrangements involving more local financing than has been the case in the past.

I hope you will understand that the exigencies of the Federal budget, as well as general Administration policy in the direction of more cost sharing by project beneficiaries, require additional financial participation by non-Federal interests.

I do note your views, and I appreciate your writing to me.

Sincerely,

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Letter From Senator Alfonse D'Amato of New York

February 17, 1982

Mr. William R. Gianelli
Assistant Secretary of the Army
for Civil Works
Room 2E570
The Pentagon
Washington, D.C. 20310

Dear Mr. Secretary:

As you know, President Reagan included in his fiscal year 1983 budget request a reserve for contingencies which included an amount for initiation of construction on new Corps of Engineers water resources projects.

It is my understanding that after consultation with local project sponsors, the Administration will request appropriation of funds to initiate construction of new water resource projects that meet the Administration's criteria for non-Federal financing and cost sharing and are economically and environmentally sound. I urge you to include the Ellicott Creek Flood Protection Project within this appropriation request.

The Ellicott Creek project is needed to reduce damages due to flooding in the lower Ellicott Creek Basin. The flooding problem has become more acute in recent years due to increased developmental activity in Amherst and Tonawanda, New York.

Congress has reaffirmed its commitment to the Ellicott Creek project with the reauthorization of the project in 1981. Given this commitment by the Congress and the demonstrated need for the project, it is essential that it receive an appropriation for fiscal year 1983.

Please feel free to call on me to provide any assistance, and I appreciate your interest in Ellicott Creek.

Sincerely,

Alfonse D'Amato

Alfonse D'Amato
United States Senator

Letter From William R. Gianelli, Assistant Secretary of the Army (Civil Works)

26 FEB 1982

Honorable Alfonse M. D'Amato
United States Senate
Washington, D.C. 20510

Dear Senator D'Amato:

I have your letter of February 17th requesting that the Ellicott Creek Flood Control Project in New York be included in our program for new construction starts in 1983, covering those projects that meet our current criteria for non-Federal financing and cost-sharing.

The project was not on our original list, prepared during the budgeting process last fall, because it lacked certain additional authorization. However, that authorization was given in December, and we will consider the project, along with a number of others, as possible additions to the original list.

Sincerely,

(Sign

William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

Mount St. Helens Emergency Work

Chairman **Hatfield**. In regard to Mount St. Helens, what do you plan for emergency work in fiscal year 1982 and fiscal year 1983 for the Toutle and Cowlitz Rivers in Washington?

General **Bratton**. Sir, all identified fiscal year 1982 emergency work has been funded. These actions include completion of pumping plants and levee protection for the urban areas along the Cowlitz River; a monitoring and sediment analysis program; and dredging of the sump at the mouth of the Cowlitz River to maintain the Columbia River navigation project. We all recognize that the immediate threat to life and property requiring emergency response has been alleviated by the actions undertaken; however, we also recognize that a long-term threat does exist. No emergency activities are planned for fiscal year 1983. We will monitor the situation under our normal programs and are prepared to respond under our existing authority should emergency conditions develop. Funds are in the fiscal year 1983 O. & M. budget to accomplish dredging of some of the increased sediment infill into the Columbia River.

Chairman **Hatfield**. What is the impact if no further dredging is accomplished on the Toutle and Cowlitz in fiscal year 1982 and fiscal year 1983?

General **Bratton**. Sir, if no excavation is accomplished on the Toutle or Cowlitz Rivers and since the Toutle River is essentially filled, sediment will continue to move into and through the Cowlitz River into the Columbia River. Based on normal precipitation patterns through fiscal year 1983, the Cowlitz River channel could be infilled up to 7 feet; however, the urban areas are expected to still have in excess of 100-year level of flood protection. Adequate funds have been allocated to dredge the projected fiscal year 1982 sediment infill in the Columbia River navigation channel. The projected fiscal year 1983 Columbia River channel infill is 8 million cubic yards, but funds to excavate only 3.5 million cubic yards have been budgeted.

Chairman HATFIELD. Does the fiscal year 1983 O. & M. budget request include funds for dredging the Mount St. Helens material from the Columbia River?

Mr. GIANELLI. The fiscal year 1983 O. & M. budget request for the Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg., is $13,045,000. This budget request contains $5.5 million for dredging 3.5 million cubic yards of anticipated sediment that will flow into the Columbia River from the Cowlitz River as a result of the Mount St. Helens eruption.

COWLITZ RIVER BASIN STUDY

Chairman HATFIELD. As I understand, funds are included in the budget request for a Cowlitz River basin study in Washington, study. Would you describe the purpose and scope of this study?

General BRATTON. The purpose of the study is for modification of the existing flood control and navigation projects made necessary by the eruption of Mount St. Helens, to provide a long-term solution to bank erosion, flooding, and navigation problems. As far as the scope, the study scope includes development of a reconnaissance report focusing on modification to existing Federal projects; study continuation beyond fiscal year 1983 is unknown.

CORPS HOPPER DREDGE MINIMUM FLEET

Chairman HATFIELD. I believe that the Corps furnished the com-mittees copies of your study on the hopper dredge requirements of the Corps minimum fleet several years ago. When was this study made available to the committees?

General BRATTON. Sir, the study was completed in December 1978 and was furnished the committees following the recall hearing on the fiscal year 1980 budget, so it would have been in the spring of 1979.

Chairman HATFIELD. So, your recommendations were made to the Congress during the spring of 1979.

General BRATTON. Not exactly. At the committee's request, we furnished copies of the study to the committees at that time. However, the study has not been forwarded to the Congress through the established approval or clearance chain.

Chairman HATFIELD. In other words, the OMB staff has not made a determination as to whether they will indorse the Chief of Engineers study recommendation.

General BRATTON. No, sir.

Chairman HATFIELD. What were the recommendations contained in the Chief of Engineers study?

General BRATTON. It was recommended that the Corps minimum fleet of hopper dredges include eight vessels—one large, four medium, and three small-class dredges.

Chairman HATFIELD. Did the study include an assessment of the defense requirements on a global basis?

General BRATTON. Yes, sir; it did. This portion of the study was eval-uated by our Engineer Studies Center.

STATUS OF NEW HOPPER DREDGE CONSTRUCTION

Chairman HATFIELD. Where do you stand on the three new seagoing hopper dredges that were funded by the Congress?

General BRATTON. The small-class hopper dredge *Yaquina* was placed into service about a year ago and it is exceeding the design objectives. The construction of the large-class hopper dredge *Wheeler* has been completed. It is now going through river and sea trial operations and will soon be available to us. The construction of the medium-class hopper dredge *Essayons* is scheduled for completion in October this year.

Chairman HATFIELD. Public Law 95-269 directs that the Corps should reduce its existing fleet to the minimum fleet level as industry demonstrates the ability to assume work previously performed with Corps dredges. What have you done about this in the hopper dredge category?

General **Bratton**. Well in advance of the enactment of Public Law 95-269, the Corps on its own initiative was reducing the size of its hopper dredge fleet. For example, we had 28 Corps hopper dredges in World War II days. By 1950, we had reduced the number of Corps hoppers to 20 ships, and in recent years we have reduced the number of Corps hoppers from 16 to the current level of 11. However, we have announced the retirement of additional hopper dredges in fiscal year 1982, and will be down to eight or nine hopper dredges by the end of this fiscal year or during the first quarter of fiscal year 1983.

NONHOPPER DREDGE CATEGORY

Chairman **Hatfield**. What reductions have been made in the non-hopper dredge category?

General **Bratton**. Since World War II, the number of cutterhead dredges have been reduced from 47 to the current level of 8 dredges. During this time frame, the number of dustpans have been reduced from 16 to 5 and the number of dipper dredges have been reduced from 14 to 1. In the overall, we have reduced our nonhopper fleet by a total of 63 vessels since World War II. I should mention that all of these existing nonhopper dredges are old, in excess of 40 years, and not suitable for national defense and emergency needs. In addition, six of the eight cutterhead dredges have discharge pipeline diameters of 12 inches or less. Therefore, they are not suitable at all for use on major navigation projects or to satisfy the defense and emergency missions included in Public Law 95-269.

Chairman **Hatfield**. What is the status of the nonhopper study?

General **Bratton**. The study of the nonhopper elements of the minimum fleet was initially completed in April 1980. The Assistant Secre-tary of the Army for Civil Works at that time, Mr. Blumenfeld, suggested some substantive changes to the study. During the fall of 1981, the rationale and findings of the revised draft of the study were presented to representatives of the dredging industry, ports, and water resources-oriented organizations. Changes suggested during this review are being considered. I expect to have the study review completed and presented to the Assistant Secretary of the Army for Civil Works by the end of the month.

Chairman **Hatfield**. You said that your hopper dredge study included a recommendation for eight hoppers in the minimum fleet and that you expected to be at or near this number by the end of this fiscal year. What will be the average age of the existing five hoppers that, along with the three new hopper dredges, would constitute the minimum fleet level of eight hopper dredges?

General **Bratton**. Over 30 years.

NEW EQUIPMENT NEEDS

Chairman **Hatfield**. Since your existing dredges are quite old, it would be helpful to have your views on your most critical needs for additional new equipment.

General **Bratton**. Our two existing medium-class cutterhead dredges are not suitable for deployment to overseas areas. They are generally obsolete and have an average age of 47 years, so their reliability over an extended period is questionable. They are entirely inadequate to pro-vide a defense and emergency production capability. When we consider the world situation, the administration emphasis on improving our military posture, and the plans for rapid deployment forces, I believe there is an urgent need for at least one self-propelled, seagoing cutterhead dredge that would be suitable for deployment to overseas areas in support of defense requirements. Looking back, dredging operations for port and channel work, construction of reclamation areas for military cantonments, and airfields were required in World War II, Korea, and Vietnam. Corps dredges were utilized in these past conflicts and could be urgently needed in the future. I feel that we must not put our forces in a position where they would have to depend on private industry, inasmuch as hazards could discourage rapid and timely response by any private firm.

Chairman **Hatfield**. I understand there has been some discussion as to whether the Corps has the right to designate the vessels that would comprise the minimum fleet. As I read Public Law 95-269 it states that the Secretary of the Army will undertake a study to determine the minimum federally-owned fleet required to perform emergency and national defense work. How do you interpret the legislation?

General BRATTON. Just as you do. The legislation also indicates that we are to reduce the size of the Corps fleet as the industry demon-strates its ability to assume a larger share of the national workload. In order to comply with this provision, we have been proceeding with the retirement of Corps dredges as the industry has constructed new hopper dredge equipment. Until such time as the administration or the Congress directs us otherwise, we are planning to reduce our fleet to the minimum fleet level of eight hopper dredges contained in our study. In other words, I feel that designation of the eight Corps dredges that would constitute the minimum fleet was essential in order to make the decision as to those Corps dredges that should be retired.

NONHOPPER DREDGE NEEDS

Chairman HATFIELD. Why should the seagoing cutterhead dredge be self-propelled? Aren't there barges that could transport the dredge to overseas areas?

General BRATTON. Yes, sir; there are such barges. However, we have designed the self-propelled feature into Corps dredges for many years. Transportation barges are limited in number and their availability at a moment's notice cannot be assured unless we construct one for ourselves. The self-propelled and seagoing features assure that the dredge would be capable of rapid response for deployment anywhere. In addition, it has been our experience that frequent moves from one geo-graphical area to another are required to meet military needs after the dredge has arrived in the theater of operations.

Chairman HATFIELD. Are there any other initial needs for new equipment?

General BRATTON. Yes, sir. The average age of our five dustpan dredges is 49 years. These vessels are also generally obsolete and their continued reliability is questionable. Dustpan dredges are a unique type of dredge and are especially effective on waterways such as the Mississippi River. The enormous volume of maritime traffic on the Mississippi could be brought to a standstill without equipment of this type. Therefore, I feel we need at least one modern dustpan dredge in the near future.

DREDGE "BIDDLE"

Chairman HATFIELD. What is the age of the *Biddle*?

General BRATTON. Thirty-five years.

Chairman HATFIELD. This is the steam-powered Corps hopper dredge that you use to keep the entrance channels to the Columbia River open, isn't it?

General BRATTON. Yes, sir.

Chairman HATFIELD. Will the *Biddle* be one of the five existing hopper dredges included in the minimum fleet?

General BRATTON. Yes, sir.

DISPOSITION OF RETIRED DREDGES

Chairman HATFIELD. You mentioned retiring some Corps hopper dredges in the recent past. What are you doing with these vessels?

General BRATTON. As provided for in House Report 95-1490, we are holding these vessels in an inactive status pending the enactment of authorizing legislation by the Congress as to the disposal of the inactive Corps dredges.

Chairman HATFIELD. What is the annual recurring cost to retain these vessels in an inactive status while you are awaiting congressional guidance?

General BRATTON. Sir, it is approaching $500,000 per year, and this does not include maintenance to keep them in a ready status. It, frankly, only keeps them anchored safely.

Chairman HATFIELD. This amount will increase as you retire the additional dredges in fiscal year 1982, won't it?

General BRATTON. Yes, sir; by the end of this fiscal year, I would estimate the figure to be at $500,000.

Chairman HATFIELD. Why were you asked to retain these vessels?

General BRATTON. House Report 95-1490 indicates that the Congress was concerned that the disposal of retired Corps hopper dredges would inhibit the investment by private industry in new dredges or the use of new industry equipment.

Chairman HATFIELD. What do you suggest the Congress do about this matter?

General BRATTON. Well, I can certainly understand the Congress concern over the disposal of these old dredges and the probability that they could be utilized on a short-term basis to the detriment of these private organizations that have invested in expensive new dredges. Such a development might lead to financial disaster for these firms. So, it would seem to me that the authorizing legislation referred to in House Report 95-1490 would consider this. Possibly the legislation could indicate that these vessels could be disposed of to friendly foreign nations or to foreign commercial interests with the proviso they would not be utilized in the future as a dredge in the United States, nor be offered for sale to commercial interests in this country with the same proviso, and that if these options did not bear fruit, that the vessels be scrapped.

HOPPER DREDGE CONSTRUCTION CAPABILITY

Chairman HATFIELD. In the event funding were to be considered for construction of additional new Corps minimum fleet dredges, what level of funds could be used for construction in fiscal year 1982?

General BRATTON. We could not get construction underway this fiscal yera. It would be necessary to prepare conceptual designs and then proceed with the preparation of plans and specifications, and this would take about 18 months. So, we could not make use of construction funds until the beginning of fiscal year 1984.

Chairman HATFIELD. What funds would be needed in fiscal years 1982 and 1983 for design so that construction of a seagoing hopper dredge could be started in fiscal year 1984?

General BRATTON. About $700,000 in fiscal year 1982 and $2.6 million in fiscal year 1983.

Chairman HATFIELD. Could the time factor be reduced by extensive usage of commercial design firms to supplement your design capability?

General BRATTON. Sir, my estimate is based on performing most of the design work with AE firms.

Chairman HATFIELD. Can you also be prepared to construct a medium-class hopper dredge in fiscal year 1984?

General BRATTON. It is possible, but I would rather concentrate our efforts on the cutterhead and dustpan designs to assure that we generate the best possible products. We recently completed the design of three new seagoing hopper dredges and it stretched us out pretty thin. In addition, the design of a seagoing cutterhead dredge will be more difficult than the usual design job because this type of vessel is not available in the United States.

Chairman HATFIELD. What about being ready for construction of a [illegible]um-class hopper in fiscal year 1985. Could you do that?

General BRATTON. Yes, sir; we could.

NONHOPPER DREDGE CONSTRUCTION CAPABILITY

Chairman HATFIELD. Would you be able to complete the design for a modern dustpan dredge so that construction of a dustpan could be initiated in fiscal year 1984 along with the construction of a seagoing cutterhead dredge?

General BRATTON. Yes, sir; we could.

Chairman HATFIELD. What would be the funding required in fiscal years 1982 and 1983 to complete the design for a new dustpan dredge?

General BRATTON. About $600,000 in fiscal year 1982 and $2.4 million in fiscal year 1983.

PERSONNEL REDUCTIONS

Chairman HATFIELD. Will the Corps' personnel reductions have any impact on the Corps' ability to respond to national and global emergencies and natural disasters?

General BRATTON. The Corps' fiscal year 1983 full-time equivalent work-year ceilings represent the minimum staffing level required to accomplish it's civil works mission. This includes emergency preparedness, mobilization planning, and disaster assistance.

Chairman HATFIELD. Can you review for the committee your current and projected personnel situation?

General GAY. As of January 31, 1982, the Corps full-time permanent personnel strength was 26,676. This number is expected to be reduced to 25,240 by the end of fiscal year 1982 and 24,600 by the end of fiscal year 1983. These end-strengths are necessary for the Corps to meet the full-time equivalent work-year ceilings established by OMB for full-time permanent personnel which have gone into effect starting with fiscal year 1982.

Chairman HATFIELD. What is the current status of ongoing studies to identify the most efficient and equitable way to accommodate these personnel reductions. What specific details and recommendations are being proposed?

General GAY. The study which considered fiscal year 1982 personnel reductions resulted in several recommendations which have been adopted by the Corps. They include an accelerated shutdown of selected dredges, a reduction in the number of line handlers at navigation projects, the centralization of several finance and accounting operations, a 5-percent reduction in headquarters and division office staffs, and an 11-percent reduction in research and development staffs. These actions are being accomplished during fiscal year 1982 and account for about one-third of the overall reduction. The number of personnel in the district offices is also being reduced, based on workloads.

In fiscal year 1983, personnel reductions will primarily come from the construction, operations and maintenance, and administrative functions. Exactly where these reductions occur and in which activities depend on various factors such as shifts in workload and field management initiatives. Additional personnel reductions beyond fiscal year 1983 would cause the Corps to further examine it's personnel resource situation.

SMALL NAVIGATION, SECTION 107 PROJECTS

Chairman HATFIELD. I note that the budget includes a request for $12 million, an increase of $120,000 over last year, for small navigation projects. How do you justify this request in light of the $150 million reduction for higher priority projects under the regular O. & M. program?

Mr. GIANELLI. The $12 million request for construction of small navigation projects will be spent to continue projects which are under construction; no funds are requested for new starts. It is not the administration's intent that navigation projects not be maintained, rather we would expect the enactment of acceptable user fee legislation to occur and this would be the basis for restoration of the $150 million reduction. The President's budget indicates that these O. & M. funds are restorable if aceptable user fee legislation is enacted.

Chairman HATFIELD. Isn't this inconsistent with the administration policy on recovering navigation operation and maintenance costs through user fees?

Mr. GIANELLI. The $12 million request does not cover operation and maintenance. Operation and maintenance of section 107 projects is under the regular operation and maintenance, general appropriation and they will be treated in the same manner as other navigation projects. However, I should point out that the administration has not formulated legislation which addresses user fees for construction of small boat harbors such as those built under the section 107 program. The plan for the near term is not to initiate new section 107 projects after fiscal year 1982.

STREAMBANK EROSION CONTROL EVALUATION AND DEMONSTRATION SECTION 32 PROGRAM

Chairman HATFIELD. I note that no funds are included in the budget for streambank erosion control activities under section 32 authority. What is the status of program authorization and the final report to Congress?

General BRATTON. The authorizing document, Public Law 93-251, established a completion data and a fund limitation for the program. As the completion date of December 31, 1981, does not extend into fiscal year 1983, funds are not requested. All the physical work to be accomplished under the program has been completed. I have sent the final report to the Secretary of the Army for subsequent transmittal to the Congress. Technology transfer to private sector via printed material and training sessions is in progress.

Chairman HATFIELD. What actions are being taken to close out existing demonstration projects and stabilize conditions before transfer to local interests?

General **Bratton**. Some projects have already been turned over to the local sponsors, but the majority of the demonstration projects will be turned over after the spring rains or floods are over. This additional period of testing will provide information on the stabilization measures. Before turning the project over to the local sponsor, an inspection visit will be made and the projects will be passed to the locals as soon as practicable after the inspection. Rehabilitation, where required, is being accomplished with available funds on a first-come-first-served basis. Those demonstration projects judged to be ineffective, or requiring excessive rehabilitation, will be allowed to deteriorate.

PROGRAM LEVEL IN CONSTANT DOLLARS

Chairman **Hatfield**. In real terms, how does the budget request for 1983 compare with the funding level for the current year?

General **Gay**. Using July 1965 constant dollars, the value of the fiscal year 1983 budget is $811 million and the fiscal year 1982 appropriation $927 million.

Chairman **Hatfield**. What is the value of the entire Corps 1983 budget compared to the 1967 funding level, based on 1965 constant dollars? Provide for the record a comparison of the levels of funding in constant dollars for each appropriation account, similar to the comparison you provided last year.

General **Gay**. Yes, sir.

[The information follows:]

CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1983
(Dollars in Millions)

ALL APPROPRIATIONS

Fiscal Year	Actual Appropriation	Value in July 1965 Dollars
1967	1,293	1,293
1968	1,305	1,249
1969	1,246	1,124
1970	1,157	955
1971	1,310	1,002
1972	1,589	1,097
1973	1,952	1,190
1974	1,770	1,031
1975	1,757	927
1976	2,184	1,074
1977	2,487	1,091
1978	2,784	1,148
1979	2,790	1,096
1980	3,263	1,185
1981	3,100	1,044
1982	2,922	927
1983	2,744 (Budget)	811

GENERAL INVESTIGATIONS

1967	32,450	32,450
1968	34,445	31,332
1969	30,015	25,147
1970	41,191	31,183
1971	39,023.5	27,895
1972	50,714	33,116
1973	57,805	34,707
1974	56,142	32,180
1975	65,284	34,926

Fiscal Year	Actual Appropriation	Value in July 1965 Dollars
1976	66,836	34,490
1977	71,920	32,227
1978	107,046	46,906
1979	137,978	56,296
1980	142,145	53,391
1981	134,013	46,659
1982	137,225	45,324
1983	129,250 (Budget)	41,225
	CONSTRUCTION, GENERAL	
1967	965,955	965,955
1968	967,599	921,523
1969	862,713.5	778,454
1970	711,992	587,058
1971	851,178	650,494
1972	1,025,084	703,844
1973	1,203,943	727,002
1974	873,589	503,399
1975	966,338	502,248
1976	1,237,151	600,460
1977	1,430,195	618,436
1978	1,537,820	620,945
1979	1,343,711	507,796
1980	1,660,966	584,957
1981	1,593,892	516,469
1982	1,416,992	432,235
1983	1,209,350 (Budget)	339,472

OPERATION AND MAINTENANCE

Fiscal Year	Actual Appropriation	Value in July 1965 Dollars
1967	178,900	178,900
1968	193,000	190,532
1969	227,300	208,611
1970	261,824.3	222,986
1971	301,830.5	235,031
1972	388,519	274,604
1973	407,100	258,420
1974	426,625	258,822
1975	494,577	267,804
1976	582,073	291,050
1977	667,600	300,217
1978	768,870	328,051
1979	833,100	343,600
1980	942,100	356,887
1981	967,905	342,250
1982	1,008,355	332,797
1983	1,011,000 (Budget)	311,857

FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

1967	87,135	87,135
1968	87,135	84,034
1969	69,600	63,973
1970	80,820	65,615
1971	83,987	63,731
1972	86,000	59,310
1973	111,620	66,051
1974	264,600	149,147
1975	120,051	61,060
1976	205,147	100,614
1977	231,497	99,741

Fiscal Year	Actual Appropriation	Value in July 1965 Dollars
1978	253,081	101,340
1979	223,035	86,056
1980	210,515	77,129
1981	237,519	80,544
1982	256,310	80,987
1983	282,000 (Budget)	82,505
	GENERAL EXPENSE	
1967	18,014	18,014
1968	19,515	18,586
1969	21,875	18,237
1970	25,356.6	19,483
1971	27,586.4	19,656
1972	29,723	19,982
1973	32,183	20,181
1974	35,083	21,903
1975	40,100	23,912
1976	43,700	23,435
1977	49,050	24,501
1978	60,000	28,494
1979	68,900	30,838
1980	76,800	31,896
1981	86,630	32,706
1982	91,000	31,837
1983	99,000 (Budget)	32,626

PREAUTHORIZATION AND PHASE I REPORTS

Chairman HATFIELD. Provide for the record a list which updates the status of preauthorization and phase I reports.

General BRATTON. Yes, sir; I will provide a list of favorable reports submitted to Congress since the 1974 Water Resources Development Act that is unchanged from last year. I will also provide a listing showing the current status of reports on projects authorized for phase I only.

[The information follows:]

Corps of Engineers Favorable Pre-Authorization Reports Submitted to Congress Subsequent to Enactment of the 1974 Water Resources Development Act

REPORT NAME	DATE SUBMITTED
Authorized in 1976 Water Resources Development Act.	
A. For Construction	
Minn. R., at Chaska, MN	24 Sep 76
Harris Fork Ck., Obion Ri., TN & NY	22 Jul 75
Neches R., Salt Water Barrier, TX	17 Sep 76
James R., Richmond, VA (Filtration Plant)	30 Jun 76
Los Angeles-Long Beach, Hbrs, (Int), CA	18 Aug 76
Lower Snake River Compensation Plan, WA, ID	18 Aug 78
Saylorville Lake, IA	29 Apr 76
Mobile Harbor, AL	10 Aug 78
DelValle Reservoir, CA	2 Jun 76
Mermentau River, IA	18 Aug 78
Bassett Creek, MN	19 Jun 78
Burnett Crystal & Scott Bays, TX	18 Aug 78
Santa Fe & Arroyo Mascaras, NM	8 Nov 78
B. For Advanced Engineering and Design Only (Phase I)	
New Jersey Coastal Inlets & Beaches, Gp II	24 Sep 76
New Jersey Coastal Inlets & Beaches, Gp III	17 Sep 76
Walkill R., Black Dirt Area, NY & NJ	11 May 76
Lock Haven, PA	30 Jul 76
Susquehanna R., Wyoming Valley, PA	19 Apr 76
James River, Richmond (Flood Control), VA	24 Sep 76
Charleston Harbor, SC	29 Mar 76
San Juan Harbor, Puerto Rico	29 Jul 76
Mississippi River at LaCrosse, WI	25 Aug 76
Presque Isle Peninsula, PA	17 Sep 76
Little Calunet River, IN	24 Sep 76
St. John's Bayou & New Madrid Floodway, MO	2 Jun 76
Nonconnah Creek, TN & MS	29 Oct 76
Brazos River, Natural Salt Pollution Control Study, TX	8 Mar 77
Rio Puerco & Rio Salado, NM	19 Oct 77
McNary 2d Powerhouse Columbia R., OR & WA	2 Feb 77
Pembina R., ND	25 Apr 79
Calleguas Creek, CA	17 Sep 76
Morrison Creek Streams GP, CA	24 Sep 76
New London Harbor, CT	26 Jul 76
Park River Subbasin, ND	24 Sep 76
Chicago-South End Lake Michigan (Int) Tunnel & Reservoir Plan (TARP), IL	15 Jun 78
Santa Ana, CA	7 Sep 78
Upper Susitna R., Basin, So Central Railbelt Area, AK	25 Jun 79
Red River Below Denision Dam, AR & LA	24 Sep 76
Cleveland Harbor, OH	26 Oct 78
Wears Creek., MO	17 Sep 76
Approved Under Section 201 of 1965 Flood Control Act	
St. Lucie Inlet, FL	24 Apr 74
Schulkill River Basin, Penna., vic of Pottstown, PA	12 Jun 74
Wildcat & San Pablo Creeks, CA	18 May 76
Saw Mill River at Elmsford & Greenburg, NY	12 Apr 76
Savannah Harbor, GA	4 Jun 76
Upper Guyandotte River Basin, W. VA.	30 Jul 76
Ardsley, NY	2 Jun 76
Bear River Basin, CA	17 Sep 76
Delaware River, Phila, PA. to Trenton, NJ	4 Jun 76
Fort Fisher, NC	29 Jul 76
Hay Creek-Birdsboro, PA	17 Sep 76
Iowa & Cedar Rivers, IA & MN at Evansdale, IA	9 Jul 76
Jonesport Harbor, ME	14 Apr 76
Kahoma Stream, Maui, HI	23 Apr 76

REPORT NAME	DATE SUBMITTED
Oregon Slough, OR	16 Jul 76
Petit Anse, Tigre & Carlin Bayous, LA	13 Apr 76
Ponce Harbor, PR	15 Jun 76
Southern Branch, Elizabeth R., VA	6 Jan 76
Grand Isle & Vic., LA	23 Sep 76
Virginia Beach Streams, VA., Canal #2	23 Sep 76
Fairport Harbor, OH	14 Sep 76
Flathead and Clark, Fork River Basin (Flathead R.) Near Kalispell, MT	20 Sep 76
Upper Baker Project, Skagit R., WA	5 May 77
Cambridge Harbor, MD	14 Jun 78
Authorization PL 95-502, Oct 21, 1978 - Replacement of Lock and Dam 26 Upper Mississippi River System Comprehensive Master Management Plan	
Lock and Dam 26, IL & MO	24 Aug76
Action Pending	
Atlantic Intracoastal Waterways Bridges, NC	25 Aug 76
Jekyll Island, GA	15 Jun 76
Blair & Sitcum Waterways, Tacoma Harbor, WA	1 Nov 78
Chetco R., OR	24 Nov 78
Gulfport Harbor, MS	28 Nov 78
Kodiak Hbr., AK	24 Nov 78
Great Lakes -St. Lawrence Seaway Navigation Season Extension - Interim on 4 Lakes	3 Aug 79
Agana River, GU	20 Nov 78
Buffalo Bayou & Tribs., TX (Int) on Upper White Oak Bayou	3 Aug 79
Buffalo Metro Area, NY (Cazenovia Creek Int.)	1 May 79
Coney Island, NY	27 Nov 78
Des Moines River Basin, IA & MN	31 May 79
Libby Reregulating Dam Power Units (Phase I), MT	12 Dec 78
Little Wood River vic Gooding & Shoshone, ID	27 Nov 78
Muskingum River Basin (Mansfield) Int, OH	27 Apr 79
Panama City Beaches, FL	7 Feb 79
Rahway R., Robinsons Branch, NJ	12 Dec 78
Rahway River, Springfield, NJ	27 Nov 78
Root River Basin, MN	20 Nov 78
Saw Mill Run, Pittsburg, PA	8 Nov 78
So. Aberdeen & Cosmopolis, WA	20 Nov 78
Tensas - Cocodrie Mitigation, LA (MRC)	17 Aug 79
Trimble Wildlife Area Replacement (Smithville Reservoir), MO	19 Sep 78
Zumbro River, Rochester, MN (Phase I)	27 Apr 79

STATUS OF AUTHORIZED PHASE I ADVANCE ENGINEERING & DESIGN STUDIES
(DOLLARS IN THOUSANDS)

PHASE I STUDIES IN FY 1983 BUDGET

STUDY	YEAR AUTHORIZED	SECTION	STATUS OF REPORT	FISCAL YEAR OF INITIAL PHASE I APPROPRIATION
Ark R & Tribs above John Martin Dam, CO	1974	1(a)	In Field	1976
Brazos Natural Salt Pollution Control, TX	1976	101(a)	In Field	1978
Chicagoland Underflow Plan, IL	1976	108	In Field	1979
Cleveland Harbor, OH	1976	175	In Field	1978
Dalton Lake, GA	1974	1(a)	In Field	1981
Gallipolis Locks and Dam, OH & WV	1976	115	In OCE	1975
McNary Lock & Dam (Second Powerhouse), OR & WA	1976	101(a)	With Sec. Army	1978
Morrison Creek Stream Group, CA	1976	101(a)	In Field	1980
Passaic River Basin Study, NJ & NY	1976	101(a)	In Field	1978
Pembina River, ND	1976	101(a)	In Field	1979
Rio Grande & Tribs (Rio Puerco & Rio Salado), NM	1976	101(a)	In Field	1978
Santa Ana River, CA	1976	109	With Sec. Army	1978
Sowashee Creek, MS	1976	171	In Field	1979
Virginia Beach, VA	1974	1(a)	In Field	1979
St. John's Bayou and New Madrid Floodway, MO (MRC)	1976	101(a)	In OCE	1978

PHASE I STUDIES NOT IN FY 1983 BUDGET

STUDY	YEAR AUTHORIZED	SECTION	STATUS OF REPORT	FISCAL YEAR OF INITIAL PHASE I APPROPRIATION
Absecon Island, NJ	1976	101(a)	Not Started	
Barnegat Inlet, NJ	1976	101(a)	In OCE	1979
Bowie Creek Lake, MS	1974	1(a)	Not Started	
Brigantine Island, NJ	1976	101(a)	Not Started	
Brunswick Harbor, GA	1976	101(a)	With Sec. Army	1978
Buena Vista, VA	1974	1(a)	Inactive	1975
Calleguas Creek, CA	1976	101(a)	In Field	1978
Camp Ground Lake, KY	1974	1(a)	In Field	1975
Cape May Point, NJ	1976	101(a)	Not Started	
Cape May Inlet - Lower Township, NJ	1976	101(a)	With Sec. Army	1978
Charleston Harbor, SC	1976	101(a)	With Sec. Army	1978
Clarion River Acid Mine Drain, PA	1976	101(a)	In Field	1978
Clopton Crossing, TX	1974	1(a)	With Congress 6/	1976
Curry Creek Lake, GA	1974	1(a)	Not Started	
Days Creek Lake, OR	1974	1(a)	In Field	1975
Edinburg Lake, MS	1974	1(a)	In Field 1/	1973
Grafton - Park River Subbasin, ND	1976	101(a)	In Field	1980
Hereford Inlet & Five Mile Beach, NJ	1976	101(a)	Not Started	
LaCrosse, WI	1976	101(a)	Not Started	
Libby Reregulating Dam Power Units, MT	1974	1(a)	With Congress	1975
Little Calumet River, IN	1976	101(a)	In Field	1978
Lock Haven, PA	1976	101(a)	With Sec. Army	1978
Long Beach Island, NJ	1976	101(a)	Not Started	
Lower Rio Grande Basin, TX	1974	68	In Field	1975
Marysville Lake (Parks Bar Site), CA	1976	159	In Field	1978

PHASE I STUDIES NOT IN FY 1983 BUDGET

STUDY	YEAR AUTHORIZED	SECTION	STATUS OF REPORT	FISCAL YEAR OF INITIAL PHASE I APPROPRIATION
New London Harbor, CT	1976	101(a)	In Field	1978
North Branch Chicago River, IL	1976	126	In Field	1978
Papillion Creek & Tributaries Lake, Site 3A, NE	1976	101(a)	In Field	1976
Presque Isle Peninsula, PA	1976	101(a)	With Sec. Army	1978
Prosperity Lake, MO	1974	1(a)	In Field	1977
Richmond, VA	1976	101(a)	With Sec. Army	1978
Roaring River Lake, NC	1974	1(a)	In Field	1975
Rochester, MN	1974	1(a)	With Congress	1975
San Juan Harbor, PR	1976	101(a)	In OCE	1979
Siuslaw River and Bar, OR	1976	101(a)	Not Started 2/	
Sixes Bridge Lake, MD & PA	1974	85	Deauthorized 3/	
Susitna River, AK	1976	160	Not Started	
Tug Fork Valley, KY, VA, & WV	1974	90	In Field 4/	1975
Verona Lake, VA	1974	85	Inactive	1975
Wallkill River, (Black Dirt Area), NJ & NY	1976	101(a)	In Field	1979
Wears Creek, Jefferson, MO	1976	101(a)	In Field 5/	1979
Wyoming Valley, PA	1976	101(a)	In OCE	1978
Bushley Bayou, LA (MRC)	1974	1(a)	With Sec. Army	1975
Greenville Harbor, MS (MRC)	1974	1(a)	With Sec. Army	1975
Horn Lk Cr & Tribs, Incl Cowpen Cr, TN & MS (MRC)	1976	101(a)	In OCE	1978
Mississippi River, East Bank, Vicksburg-Yazoo Area, MS (MRC)	1974	1(a)	In Field	1975
Mississippi River, East Bank, Natchez Area, MS (MRC)	1974	1(a)	In Field	1975
Nonconnah Creek, TN & MS (MRC)	1976	101(a)	In OCE	1978

PHASE I STUDIES APPROVED FOR PROSECUTION UNDER AUTHORITY OF SECTION 101(C) OF 1976 WRDA

Blair and Sitcum Waterways, WA	101(c)	In Field	1979

STATUS OF AUTHORIZED PHASE I ADVANCE ENGINEERING & DESIGN STUDIES
(DOLLARS IN THOUSANDS)

1/ AE&D terminated due to lack of local cooperation.
2/ Public Law 96-367 authorized construction.
3/ Public Law 97-128 deauthorized Phase I study.
4/ Public Law 93-367 authorized construction for Levisa and Tug Forks of the Big Sandy River and Cumberland River, WV, VA & KY areas.
5/ Returned to field for further review.
6/ Negative Report.

ACTIVITIES REQUIRING AUTHORIZING LEGISLATION

Chairman **HATFIELD**. Provide for the record a list of those activities contained in the fiscal year 1983 budget that require legislation to fully use the funds requested.

Mr. **GIANELLI**. There are no items contained in the fiscal year 1983 budget that require legislation to fully use the funds requested. There are offsets amounting to $519 million which are dependent on legislation.

5-YEAR INVESTMENT PROGRAM

Chairman **HATFIELD**. Provide for the record the current 5-year investment plan for the Corps of Engineers civil works program.

General **HEIBERG**. Yes, sir.

[The information follows:]

5-YEAR INVESTMENT PROGRAM, FISCAL YEARS 1983-87

The 5-year investment program for this year is a listing, by water resources region, of all projects which could reasonably be expected to have preconstruction planning completed and be available as candidates for construction within the 5-year period fiscal year 1983 to fiscal year 1987, assuming necessary funding and project authorization. The listing shows the total project cost, the benefit-cost ratio at the applicable discount rate, and a symbol indicating the current status of the project with regard to funding. A footnote on the last page explains the meanings of the status symbols. While the listing indicates the potential of a project as a candidate for a new construction start in the next 5 years, its inclusion in this list in no way guarantees its eventual construction. All eligible projects receive considerable review and must meet all current legal and institutional criteria for selection. Given the current trend in budget restrictions, we would expect that only a fraction of these projects will actually be funded for initiation of construction in the next 5 years, and then, only where the project sponsors agree to cost share and provide upfront financing in accordance with the current objectives of the administration. At this time, the Department of the Army is working with sponsors of 11 projects with the aim of recommending a fiscal year 1983 budget amendment for those new starts which meet the financing objectives.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS - CIVIL WORKS
FY 1983-87 WATER RESOURCE INVESTMENT PROGRAM

Project Status 1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/	
	NEW ENGLAND		135,200	
PL	Big River Reservoir, RI	1.12	34,700	
CP	Bristol Harbor, RI.	2.10	6,000	
PN	Ipswich River, MA	0.84	3,070	
AC	Jonesport Harbor, ME	1.60	10,900	
PL	Leominster, MA	0.92	8,180	
AP	Nantasket Beach, MA	1.30	6,700	
PL	New Haven Harbor, CT	1.70	25,850	
	New London Harbor, CT	NA	NA	
UP	North Nashua River, MA	NA	NA	
PL	Town Brook, Quincy, MA	1.40	22,000	
PP	Whitmanville Lake, MA	1.50	17,800	
	MIDDLE ATLANTIC		1,819,595	
AC	Ardsley, NY	1.12	3,750	
PL	Atlantic Coast of Maryland, MD	1.90	31,000	
AC	Baltimore Harbor and Channels (50-foot), MD and VA	5.30	337,560	
PL	Barnegat Inlet, NJ (Phase I)	1.50	34,600	(350)
UP	Cape May Inlet to Lower Township, NJ (Phase I)	1.60	14,200	(530)
UP	Delaware Coast, DE.	2.60	56,100	
AP	Delaware River, Philadephia, PA to the Sea, Anchorage, PA, NJ, and DE	NA	25,000	
AP	Delaware River, Philadelphia, PA to Trenton (Tioga Terminal), PA and NJ	14.00	1,790	
UP	Delaware River, in the Vicinity of Camden, NJ	11.80	5,080	
PC	Elmsford and Greensburg, NY	1.73	6,890	
UP	Francis E. Walter Dam Modification, PA.	1.30	74,800	
PL	Kill Van Kull & Newark Bay Channels, NY & NJ	7.00	182,000	
AC	Liberty State Park Levee and Seawall, NJ.	NA 5/	34,900	
PL	Lock Haven, PA (Phase I)	0.93	69,800	(931)
UP	Norfolk Harbor, VA	3.50	480,000	
AP	Ocean City Harbor and Inlet, MD	3.20	830	
UP	Passaic River, NJ (Phase I)	NA	NA	
AP	Prompton Lake, PA (Modification).	1.00	42,150	
AC	Richmond Filtration Plant, VA	1.30	12,955	
PL	Richmond, VA (Phase I)	1.10	88,700	(803)
UP	Susquehanna Basin at Harrisburg, PA	1.50	117,000	
PP	Tamaqua, PA	1.10	8,100	
UP	Virginia Beach Streams Canal No. 2, VA	1.02	5,390	
PL	Wyoming Valley, PA (Phase I)	0.97	187,000	(1,445)
	SOUTH ATLANTIC-GULF		1,937,200	
PL	Charleston Harbor, SC (Phase I)	2.10	70,730	(1,100)
NA	Charleston Harbor, Wando River, SC	2.40	3,309	
CP	Coosa River, Montgomery to Gadsden, AL	0.40	1,133,000	
PL	Folly Beach, SC	2.00	3,090	
AC	Fort Fisher, NC	1.40	8,300	
PL	Lake Lanier Reregulation Dam, GA.	1.80	21,800	
PC	Manatee County, FL	1.80	11,517	
CP	Manatee Harbor, FL	10.20	10,764	
UP	Mobile Harbor Deepening, AL	1.50	407,016	
PL	Oates Creek, GA	2.20	11,710	
PL	Panama City Beaches, FL	3.10	59,403	
AC	Randleman Lake, NC	1.60	109,000	
UP	Savannah Harbor (Widening), GA	1.20	16,504	
**	Sowashee Creek , MS (Phase I)	1.50	17,800	(667)
AP	Tampa Harbor Branch Channels, FL.	1.50	44,922	
PL	Wilmington Harbor-Northeast Cape Fear River, NC	2.50	8,335	

Project Status1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/
	GREAT LAKES		349,624
AC	Beaver Bay Harbor, MN	NA	2,928
PN	Black River Harbor, Alcona County, MI	1.01	3,145
PL	Cazenovia Creek, NY	1.30	2,550
AC	Cedar River Harbor, MI	3.00	1,556
CP	Cross Village Harbor, MI	1.24	5,665
AC	Dansville, NY	1.17	944
PN	Forestville Harbor, MI	1.11	4,360
UP	Geneva-on-the-Lake, OH	1.60	5,750
PL	Grand Haven Harbor, MI	1.40	14,290
AC	Green Bay Harbor, WI	3.40	13,970
AP	Holland Harbor, MI	1.40	2,900
AC	Knife River Harbor, MN.	NA	1,783
**	Little Calumet River, IN (Phase I).	2.40	118,200 (2,673)
AC	Lutsen Harbor, MN	NA	7,476
AP	Middle Channel, MI.	NA	720
PL	Monroe Harbor, MI	4.10	122,070
AP	Port Bay Harbor, NY	1.19	6,260
AC	Port Ontario Small Boat Harbor, NY	NA	5,017
**	Presque Isle, PA (Phase I)	2.10	24,000 (1,100)
UP	Reno Beach-Howard Farms, OH	5.90	6,040
	OHIO		480,161
UP	Gallipolis Locks and Dam, WV (Phase I)	12.00	299,500
UP	Killbuck, OH	1.10	6,379
UP	Logan, OH	1.50	6,284
UP	Mansfield, OH	2.70	4,173
PP	Nelsonville, OH	1.02	6,400
AP	North Chillicothe, OH	1.80	9,780
AP	Russell and Allison Levee, IL	1.10	18,100
PL	Saw Mill Run, PA	1.16	6,645
AP	South Frankfort, KY	1.40	4,900
AP	Summersville Hydro, WV.	1.50	111,000
PP	Vincennes, IN	1.70	7,000
	UPPER MISSISSIPPI		6,105,665
PN	Angler Use Sites, MO	0.49	4,080
CP	Bassett Creek, MN	1.15	17,300
UP	Chaska, MN	1.17	19,280
**	Chicagoland Underflow Plan, IL (Phase I)	1.24	5,480,000
AC	Davenport, IA	1.12	36,690
AC	Eldred and Spankey Drainage and Levee District, IL	2.40	12,810
AP	Fort Chartres and Ivy Landing Drainage District No. 5, and Stringtown Drainage and Levee District No. 4, IL	0.96	7,356
PL	Green Bay Levee & Drainage District No. 2, IA	1.20	5,480
AP	Harriet Island Harbor, MN	5.00	669
CP	Hartwell Drainage and Levee District, IL	1.19	11,720
UP	Hillview Drainage and Levee District, IL	1.40	11,805
PL	Houston (Root River), MN	1.90	6,620
PL	Loves Park, IL	1.11	25,180
UP	Meredosia, IL and Meredosia, Willow Creek and Coon Run Drainage and Levee District, IL	1.40	11,080
UP	Meredosia Lake and Willow Creek Drainage and Levee District, IL	1.04	9,105
PP	Mississippi River Agricultural Area No. 12, MO	0.98	4,416
CP	Moline, IL	1.16	21,310
AP	Muscatine Island Levee District and Muscatine-Louisa County Drainage District No. 13, IA	2.10	13,760
PP	Nutwood Drainage and Levee District, IL	2.30	9,190
PP	Pine Ford Lake, MO	1.03	133,000

Project Status 1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/	
PL	Redwood River Below Marshall, MN.	1.50	3,370	
UP	Rochester, MN (Phase I)	1.10	80,200	(457)
UP	Rock River Agricultural Levees, IL	1.90	38,000	
AC	Savanna Small Boat Harbor, IL	1.70	504	
UP	State Road and Ebner Coulees, WI	1.30	22,480	
AC	Sny Island Levee and Drainage District, IL	NA	2,150	
PC	Union Lake, MO	0.95	106,000	
PL	West Des Moines, IA	1.80	12,110	
	LOWER MISSISSIPPI		710,012	
PP	Big Creek and Tributaries, AR (MR&T)	1.60	40,542	
PA	Bushley Bayou, LA (MR&T) (Phase I)	1.15	40,400	(360)
PL	Eight Mile Creek, AR (MR&T)	1.60	12,328	
PA	Greenville Harbor, MS (MR&T) (Phase I)	8.0	38,200	(250)
AC	Harris Fork Creek, TN & KY (MR&T)	1.10	8,940	(319)
PL	Helena Harbor, AR (MR&T)	1.60	49,800	
PL	Horn Lake Creek & Tribs., Incl. Cow Pen Creek, MS & TN (MR&T) (Phase I)	1.80	3,210	(615)
NA	Lake Pontchartrain North Shore, LA	4.60	1,114	(170)
UP	L'Anguille River Basin, AR (MR&T)	1.30	22,600	
PL	Memphis Harbor, TN (MR&T)	4.20	100,508	
UP	Mississippi River, East Bank Levees, Vicksburg-Yazoo Area, MS (MR&T) (Phase I)	0.82	28,400	(345)
PL	Nonconnah Creek, TN & MS (MR&T) (PhaseI).	1.80	131,700	(1,020)
**	Petit Anse, Tigre and Carlin Bayous, LA	0.93	5,910	
AP	St. Johns Bayou, New Madrid Floodway, MO (MR&T) (Phase I)	1.30	98,000	(740)
AC	Tensas River National Wildlife Refuge, LA (MR&T)	NA	40,000 6/	
PL	Vicksburg Harbor, MS (MR&T)	2.30	64,000	(550)
PA	White River Navigation-Mouth to Batesville, AR	1.20	24,360	
	SOURIS-RED-RAINY		214,630	
PC	Burlington Dam, ND	1.50	124,000	
AP	Grafton, ND (Phase I)	2.00	19,130	(825)
**	Pembina River, ND (Phase I)	1.20	40,500	(1,480)
PC	Twin Valley Lake, MN	1.01	31,000	
	MISSOURI		252,260	
NA	Brush Creek, MO	1.30	13,800	
AP	Lower Grand River, MO	1.30	33,600	
AP	Melvern and Pomona Lakes (Road Improvement), KS	NA	500	
PC	Miles City, MT	0.92	5,880	
AC	Missouri National Recreation River, NE and SD	NA	21,000	
PP	Onaga Lake, KS	1.80	95,300	
NA	Perry Creek, IA	1.20	28,200	
AP	Springfield Water Intake, SD	NA	2,190	
AP	Tuttle Creek Lake, Road and Bridge (1976 Act), KS	NA	630	
AC	Tuttle Creek Lake, Road Improvement (1974 Act), KS	NA	500	
**	Wears Creek, MO (Phase I)	NA	44,300	(50)
NA	Westerly Creek, CO	1.60	6,360	
	ARKANSAS-WHITE-RED		2,145,670	
UP	Arkansas River Basin Chloride Control, OK, TX KS,	0.25	881,800	
PL	Arkansas River & Tribs. (Hydropower and Other Purposes) Murray L&D 7, AR	1.34	82,000	
PL	Arkansas River & Tribs. (Hydropower & Other Purposes) W.D. Mayo L&D 14, OK	1.40	99,200	

Project Status1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/
UP	Arkansas River - Great Bend to Tulsa at Halstead, KS	1.14	6,900
UP	Big and Little Sallisaw Creeks, OK	1.50	3,800
AC	Big Pine Lake, TX	0.98	86,000
NA	Brewster to Florence, CO, Arkansas River & Tribs. above John Martin Dam (Phase I)	0.80	2,070 (421)
AP	Douglass Lake, KS	1.00	71,900
**	Florence, CO Arkansas River & Tribs. above John Martin Dam (Phase I)	1.15	12,370 (554)
UP	Ft. Gibson Lake Power Units 5 and 6, OK	1.50	21,700
**	Fountain Creek, CO, Arkansas River & Tribs. above John Martin Dam	1.20	7,100
**	Fourche Bayou in the Vicinity of Little Rock, AR	2.20	26,500
UP	Lake Texoma Perimeter Access Roads, TX	NA	3,000
UP	Lake Wichita, Holiday Creek, at Wichita Falls, TX	1.80	23,400
UP	Norfork Lake, Power Units 3 and 4, AR	1.07	35,300
PL	Parker Lake, OK	1.20	37,500
PC	Pine Mountain Lake, AR & TX	1.30	63,600
NA	Portland, CO - Arkansas River & Tribs. above John Martin Dam	1.17	1,600
UP	Prosperity Lake, MO (Phase I)	0.36	47,300 (858)
NA	Pueblo, CO -Arkansas River & Tribs. above John Martin Dam	0.51	430
PC	Red River Basin Chloride Control, OK	1.60	185,000
PL	Red River Waterway, Index to Denison Dam, AR, LA & TX	1.60	260,000
PN	Sand Lake, OK	1.60	26,900
PC	Shidler Lake, OK	1.90	46,500
PL	Verdigris River, Mingo Creek, KS & OK	2.80	107,000
CP	West Agurs Levee, LA	1.16	800
AP	White River Fish Hatchery, AR	NA	6,000
	TEXAS-GULF		2,147,471
UP	Big Sandy Lake, TX	1.07	99,100
AP	Brazos Island Harbor (42-Foot Project), TX	2.00	22,729
UP	Brazos Natural Salt Pollution Control, TX (Phase I)	1.30	107,000 (1,800)
UP	Clear Creek, TX	2.90	80,177
PP	Elm Fork Floodway, TX	1.70	125,000
AC	Freeport Harbor, TX (1970 Act)	6.00	76,967
UP	Lower Rio Grande Basin, TX (Phase I)	2.10	163,730 (1,370)
UP	Millican Lake, TX	1.90	264,000
AC	Navarro Mills Lake, TX Road Relocation	NA	3,400
UP	Neches River and Tributaries, Salt Water Barrier at Beaumont, TX	1.80	31,808
PN	Pecan Bayou Lake, TX	1.10	43,100
UP	Trinity River, TX	1.50	1,053,000
UP	Upper White Oak Bayou, Vicinity of Houston, TX	1.60	77,460
	RIO GRANDE		85,300
UP	Rio Grande Floodway, Truth or Consequences Unit, NM	NA	NA
-	Rio Grande & Tribs. (Middle Rio Grande), Bernalillo to Belen, NM	1.40	37,600
**	Rio Grande & Tribs. (Rio Puerco & Rio Salado), NM (Phase I)	1.70	47,700 (1,930)
UP	Santa Fe River and Arroyo Mascaras, NM	NA	NA
	COLORADO		12,623
UP	Holbrook, Little Colorado River, AZ	2.00	9,790
PL	Puerco River, NM	1.70	2,833

Project Status1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/
	GREAT BASIN		133,932
UP	Humbolt River and Tributaries, NV	1.30	36,162
AC	Little Dell Lake, UT	1.70	81,970
NA	Truckee Meadows, NV	1.80	15,800
	COLUMBIA-NORTH PACIFIC		1,112,560
CP	Blair and Sitcum Waterways, WA	2.50	28,300
UP	Bonneville New Lock, OR	1.30	167,000
AC	Bonneville Power Units, OR & WA	2.70	27,900
PL	Chehalis River at South Aberdeen, WA	1.00	18,200
CA	Chetco River, OR	1.11	8,240
PL	Grays Harbor Deepening, WA	1.90	82,800
CP	Johnson Creek, OR	1.82	5,020
PL	Little Wood River in the Vicinity of Gooding and Shoshone, ID	2.50	3,500
CP	McNary 2nd Powerhouse, OR and WA (Phase I)	1.40	562,000 (3,500)
AP	Peninsula Drainage District No. 2, OR	5.30	5,670
AC	Siuslaw River and Bar, OR	1.04	33,500
AC	Strube Lake and Cougar Additional Unit, OR	2.36	106,000
PP	Wenatchee Canyon, WA	0.87	37,500
PL	Wynoochee Hydro & Fish, WA	2.20	18,780
PL	Yakima River, Union Gap, WA	1.20	8,150
	CALIFORNIA		2,126,865
AC	Bodega Bay, CA	2.20	4,615
PL	Cache Creek, CA	1.90	27,000
UP7/	Cottonwood Creek, CA	1.30	458,000
UP	Fisherman's Wharf Area, San Francisco Harbor, CA	1.30	15,800
UP	Goleta and Vicinity, CA	1.04	54,180
AC7/	Merced County Streams, CA	1.05	101,800
NA	Moss Landing Harbor, CA	1.30	3,200
UP	Noyo River and Harbor, (Channel Extension) CA	1.30	1,790
CP	Oakland Outer Harbor (Deepening), CA	2.70	37,800
NA	Oceanside Harbor, CA	2.00	9,500
UP	Pajaro River, CA	3.00	3,780
UP	Redbank and Fancher Creeks, CA	1.30	72,600
PL	Richmond Harbor, CA	2.30	37,800
UP	Sacramento River Deep Water Ship Channel, CA	2.40	90,800
NA	San Diego County, Vicinity of Oceanside, CA	1.00	13,800
CP	San Luis Rey River, CA	1.11	34,400
UP	Santa Ana River, CA (Phase I)	1.90	1,160,000
	ALASKA		233,100
CP	Bradley Lake, AK	2.60	210,000
AC	Kake Harbor, AK	1.60	10,500
PL	Kodiak Harbor, AK	2.10	12,600
	HAWAII		44,761
PL	Agana River, Guam	1.40	8,170
AC	Kahoma Stream Flood Control, HI	1.60	20,000
PC	Kaunakakai Small Boat Harbor, HI	3.00	2,170
PC	Kawaihae Small Boat Harbor, HI	2.60	2,590
PC	Kikiaola Small Boat Harbor, HI	2.20	2,090
PC	Maalaea Small Boat Harbor, HI	3.30	5,660
PL	Lava Flow Control, HI	9.00	4,081

Project Status 1/ 2/	Region/Project	Benefit-Cost Ratio 3/	Total Project Cost ($000) 4/
	PUERTO RICO AND VIRGIN ISLANDS		82,454
AC	Ponce Harbor, PR	7.80	9,860
PL	San Juan Harbor, PR (Phase I)	6.00	66,304 (500)
AP	San Juan, PR	2.40	6,290
	THE NATION		20,129,083

FOOTNOTES

1/ The project status represents the status as of December 1981.

2/ Status Code description

PROJECTS WITH PLANNING & ENGINEERING COMPLETELY FUNDED IN FY 1982

Symbol	Description
AC	Available for initiation of construction in Fiscal Year 1983.
CA	Available for initiation of construction in Fiscal Year 1983 subject to approval of Secretary of the Army, the President, and/or authorization by Congress.
PC	Not available for initiation for construction in Fiscal Year 1983.
LA	Funded for land acquisition and available for initiation of construction in Fiscal Year 1983.
LN	Funded for land acquisition and not available for initiation of construction in Fiscal Year 1983.

PROJECTS WITH INITIAL PLANNING & ENGINEERING NOT YET FUNDED IN FY 1982

Symbol	Description
NA	Unauthorized and not available for initiation of planning and engineering in Fiscal Year 1983.
PL	Available for initiation of planning and engineering in Fiscal Year 1983, but not yet authorized for construction.
AP	Available for initiation of planning and engineering in Fiscal Year 1983 (projects authorized for construction).
PA	Available for initiation of planning and engineering or Legislative Phase I planning in Fiscal Year 1983 subject to submission of a report to the Secretary of the Army by the Chief of Engineers and notification to Congress of the Chief's approval as required by the Water Resource Development Act of 1976.
PI	Available for initiation of Phase I planning in Fiscal Year 1983. (Projects specifically authorized for Phase I planning only.)
**	Legislative Phase I Planning initiated but not available for Phase II.
PN	Authorized but not available for initiation of planning and engineering or Legislative Phase I planning in Fiscal Year 1983.

PROJECTS WITH PREVIOUS PLANNING AND ENGINEERING FUNDS

UP	Available for continuation of planning and engineering funding in Fiscal Year 1983.
CP	Available for completion of planning and engineering funding in Fiscal Year 1983.
PP	Not available for continued planning and engineering funding in Fiscal Year 1983.

PROJECTS BUDGETED FOR INITIATION OF PLANNING AND ENGINEERING OR CONSTRUCTION IN FISCAL YEAR 1983

BC	Budgeted for initiation of construction in Fiscal Year 1983.
BP	Budgeted for initiation of planning and engineering in Fiscal Year 1983.

3/ Benefit-cost ratios are based on the applicable discount rate, usually 3 1/4 % or 7 5/8%.

4/ Figures in ( ) are cost of Phase I AE&D for projects authorized for Phase I AE&D only. All costs are total project costs (Federal and non-Federal), are at 1 October 1981 price level and do not include the effect of future inflation.

5/ Authorized in 1976 Water Resources Development Act without Corps of Engineers Report. Benefits not yet developed.

6/ This mitigation project involves the purchase of approximately 50,000 acres of land. Total project cost is $50 million, of which the Corps' share is $40 million and Department of Interior's share is $10 million.

7/ Construction of this project shall not be initiated until approved by the Secretary of the Army and the President as required by the River and Harbor Act of 1970.

Studies and Projects Not Continued

Chairman HATFIELD. Also provide for the record a list of all those studies, projects, programs, and activities funded in the current year for which no funds are requested for fiscal year 1983; and the reason why no funds are requested.

General BRATTON. Yes, sir.

[The information follows:]

Studies/Projects Which Were Funded With FY 1982 Appropriations, But Were Not Included In The FY 1983 Budget Request

Study/Project Name	Remarks
Lower Mississippi River Division	
Studies:	
Aloha-Regolette Area, LA	Low priority needs.
Cape Gieardeau-Jackson Metropolitan Area, MO	Completed with FY 1982 funding.
Carlyle Lake and Lake Shelbyville, IL	Completed with FY 1982 funding.
Louisiana Coastal Area, LA	Low priority needs.
St. Louis Harbor, MO & IL	Completed with FY 1982 funding.
AE&D PROJECTS:	
Eldred & Spankey Drainage & Levee District, IL	Completed with FY 1982 funding.
Nutwood Drainage & Levee District, IL	Completed with FY k982 funding.
Pine Ford Lake, MO	Planning suspended pending review action on Meramec Basin report.
Red River Waterway, Shreveport, LA to Vic of Index, AR, AR & LA	Low priority needs.
Construction Projects:	
Atchafalaya River & Bayous Chene, Boeuf & Black, LA	Completed with FY 1982 funding.
Overton-Red River Waterway, Lower 31 Miles, LA	Completed with FY 1982 funding.
Red River Levees & Bank Stabilization Below Denison Dam, AR, LA, & TX	Completed with FY 1982 funding.
Red-River Emergency Bank Protection, LA, AR, OK & TX	Deferred pending economic justification for remaining bank stabilization work.
Mississippi River and Tributaries	
Studies:	
Horn Lake Creek & Tributaries, Incl. Cowpen Creek, TN & MS (Phase I)	Completed with FY 1982 funding.
Larto Lake-Saline Lake Area, LA	Low priority needs.
Mississippi & Louisiana Estuarine Areas, LA & MS	Completed with FY 1982 funding.
Nonconnah Creek, TN & MS (Phase I)	Completed with FY b982 funding.
St. Francis River, MO & AR (Fish & Wildlife)	Low priority needs.
AE&D Projects:	
Eastern Rapides & South-Central Avoyelles Parishes, LA	Low priority needs.
Harris Fork Creek, TN & KY	Completed with FY 1982 funding.
Construction Projects:	
Lake Neark, AR	Completed with FY 1982 funding.
Tensas River National Wildlife Refuge, LA	Funds will not be obligated for land acquisition pending a determination as to which projects authorized for mitigation will be built and the amount of mitigation land associated with each.
Missouri River Division	
Studies: None	None.
AE&D Projects: None	None.
Construction Projects:	
Bear Creek Lake, CO	Completed with FY 1982 funding.
Clinton Lake, KS	Completed with FY 1882 funding.
Hillsdale Lake, KS	Completed with FY 1982 funding.
Smithville Lake, MO	Completed with FY 1982 funding.
New England Division	
Studies:	
Housatonic River Basin, CT & MA	Deferred, no Federal interest.
Lynn Harbor, MA	Implementation chance poor.
Providence Harbor, (Debris Study), RI	Completed with FY 1882 funding.
Southeastern New Hampshire, NH	Completed with FY 1982 funding.

Studies/Projects Which Were Funded With FY 1982 Appropriations, But Were Not Included In The FY 1983 Budget Request

Study/Project Name	Remarks
Construction Projects:	
Clark Point, MA (Reimb)	Completed with FY 1982 funding.
Cliff Walk, Newport, RI	Will continue with FY 1982 funding. No FY 1983 requirement.
North Atlantic Division	
Studies:	
Crisfield Harbor, Somerset County, MD	Reclassified Inactive.
Deleware Rvier Estuary Salinity Intrusion, DE	Completed with FY 1982 funding.
Great Lakes-Hudson River Waterway, NY	Regional study program priorities precluded continuing study.
Hackensack Rvier Basin, NJ & NY	Regional study program priorities precluded continuing study.
Hampton Roads Drift Removal, VA	Completed with FY 1982 funding
Norfolk, Vicinity of Willoughby Spit, VA	Completed with FY 1982 funding.
Susquehanna River Basin Auth Report, NY, PA, & MD	Completed with FY 1982 funding.
AE&D Projects:	
Ardsley, NY	Completed with FY 1982 funding.
Construction Projects:	
Baltimore Harbor & Channels, MD & VA (1958 Modification)	Completed with FY 1982 funding.
East Rockaway Inlet & Jamaica Bay, NY	Completed with FY 1982 funding.
Fourmile Run, City of Alexandria & Arlington Co. VA	Completed with FY 1982 funding.
Tioga-hammond Lakes, PA	Completed with FY 1981 funding except for Deferred Recreation.
North Central Division	
Studies:	
Duluth Superior Harbor, MN & WI	Completed with FY 1982 funding.
Grafton Park River Subbasin, ND (Phase I)	Completed with FY 1982 funding.
Great River Resource Management Study (Great), IL, IA, MO, & WI	Completed with FY 1982 funding.
Lake Erie Wastewater Management, OH MI, NY, PA, & IN	Completed with FY 1982 funding.
Little Calumet River, IN (Phase I GDM)	Completed with FY 1982 funding.
Reservoirs at Headwaters, MN	Completed with FY 1982 funding.
The Iowa-Cedar River, IA & MN	Completed with FY 1982 funding.
Western Lake Erie Shore, OH	Low priority need.
AE&D Projects:	
Cross Village Harbor, MI	Low priority need.
Hannibal, MO	Local interest just recently expressed.
Sheyenne River Flood Control Project, ND	Need for additional Congressional authorization.
Construction Projects:	
Ashtabula Harbor, OH (Major Rehab)	Completed with FY 1982 funding.
Beverly Shores, IN	Completed with FY 1982 funding.
Ellicott Creek, NY	Authorizing legislation signed too late to consider for FY 1982 budget.
Evansdale, IA	Completed with FY 1982 funding.
Irondequoit Bay, NY	Lack of local cooperation.
Little Calumet River, IL	Lack of local cooperation.
Mississippi River, Lock & Dam, MN (Rehab)	Completed with FY 1982 funding.
Red Rock Lake, IA (Rec Dev)	Completed with FY 1982 funding.
Roseau River, MN	Deferred pending execution of mitigation agreement with Canada.

Studies/Projects Which Were Funded With FY 1982 Appropriations, But Were Not Included In The FY 1983 Budget Request

Study/Project Name	Remarks
Wild Rice River South Branch & Felton Ditch, MN	Completed with FY 1982 funding.
North Pacific Division	
Studies:	
Blair & Sitcum Waterways, WA	Budget Constraints.
Grays Harbor & Chehalis River, Hoquiam River, WA	Completed with FY 1982 funding.
Rouge River at Gold Beach, OR	Low likelyhood of implementable project.
Yakima Valley Regional Water Management, WA	Only addresses low priority purposes.
AE&D Projects:	
Bradely Lake, AK	Completed with FY 1982 funding.
Johnson Creek, OR	Lack of adequate local assurances.
Siuslaw River & Bar, OR	Completed with FY 1982 funding.
Construction Projects:	
Applegate Lake, OR	Completed with FY 1982 funding.
Elk Creek, OR	Resumption of construction dependant upon indication by Congress that it intends that construction be continued.
John Day Lock, OR & WA (Rehab)	Completed with FY 1982 funding.
Lewiston Clarkston Bridge, ID & WA	Completed with FY 1982 funding.
Libby Dam - Lake Koocanusa, MT	Completed with FY 1982 funding.
McNary Lock & Dam, Lake Wallula, OR & WA	Completed with FY 1982 funding.
Nehalen Bay, OR (Rehab)	Completed with FY 1982 funding.
Snettisham, AK	Seeking upfront financing.
Ohio River Division	
Studies:	
Camp Ground Lake, KY (Phase I)	Implementation chance poor.
Central Ohio Survey at Nelsonville, OH	Reanalysis of economic justification.
AE&D Project:	
Louisville Lake, IL	Implementation chance poor.
Construction Projects:	
Cannelton Locks and Dam, IN & KY	Completed with FY 1982 funding.
Dayton, KY	Completed with FY 1982 funding.
Levisa & Tug Fork of Big Sandy & Cumberland River, WV, VA, KY	Requires further formulation of reasonable independantly functioning project elements.
Newburgh Locks and Dam, IN & KY	Completed with FY 1982 funding except for deferred recreation.
Uniontown Locks and Dam, IN & KY	Completed with FY 1982 funding.
William H. Harsha Lake, OH	Completed with FY 1982 funding except for deferred recreation.
Willow Island Locks and Dam, OH & WV	Completed with FY 1982 funding except for deferred recreation.
Yatesville Lake, KY	Lack of high priority benefits.
Pacific Ocean Division	
Studies:	
Northern Marianas, CM	Not authorized.
AE&D Projects: None	
Construction Projects: None	

Studies/Projects Which Were Funded With FY 1982 Appropriations, But Were Not Included In The FY 1983 Budget Request

Study/Project Name	Remarks
South Atlantic Division	
Studies:	
Biscayne Bay, FL	Implementation chance poor.
Central and Southern Florida, Canal 18, FL	Completed with FY 1982 funding.
Charleston Harbor, SC	Completed with FY 1982 funding.
Golden Gate Estates, FL	Implementation chance poor.
Mexico Beach Inlet, FL	Low priority needs.
Pascagoula River Basin, MS	Completed with FY 1982 funding.
Roanoke River, South Boston and Vicinity, NC & VA	Completed with FY 1982 funding.
Sarasota County, FL	completed with FY 1982 funding.
Shark River Slough, FL	Completed with FY 1982 funding.
Six Mile Cypress Slough, FL	Implementation chance poor.
Tampa Harbor (Big Bend & Alafia River), FL	Completed with FY 1982 funding.
Withlacoochee River, FL	Completed with FY 1982 funding.
Wrightsville Beach, NC	Completed with FY 1982 funding.
AE&D Projects:	
Fort Fisher, NC	Completed with FY 1982 funding.
Montgomery to Gadsden, Coosa River Channel, AL	No economic justification.
Construction Projects:	
Carolina Beach and Vicinity, NC	Initial fill and advance nourishment completed with FY 1982 funding.
Pinellas County, FL	No requirement for periodic renourishment
Port Everglades Harbor, FL	Completed with FY 1982 funding.
West Point Lake, AL & GA	Remaining recreation deferred.
South Pacific Division	
Studies:	
Crescent City Harbor, CA	Completed with FY 1982 funding.
Guadalupe River, CA	Less than 50% chance of implementable plan at time budget formulated.
Oceanside Harbor, CA	Completed with FY 1982 funding.
Sacramento-San Joaquin Delta, CA	Completed with FY 1982 funding.
San Diego County Streams, CA	Completed with FY 1982 funding.
Sunset Harbor, CA	Low priority benefits, less than 50% chance of implementation.
AE&D Projects:	
Bodega Bay, CA	Completed planning in FY 1982.
Goleta and Vicinity, CA	Funding constraints.
Merced County Streams, CA	Completed planning in FY 1982.
Construction Projects:	
San Diego River and Mission Bay, CA	Recreational boating primary benefit.
Santa Maria Valley Levees, CA	Completed with FY 1982 funding.
Santa Paula Creek Channel, CA	Reformulation of project.
South Western Division	
Studies:	
Guadalupe River Channel to Victoria, TX	Completed with FY 1982 funding.
Palo Blanco & Cibolo Creeks, Falfurrias, TX	Completed with FY 1982 funding.
Pleasure Island at Port Arthur, TX	Low priority needs.
Tenkiller Ferry Lake, OH	Completed with FY 1982 funding.
Tulsa Urban Study, OK	Completed with FY 1982 funding.
Walnut Branch Seguin, TX	Completed with FY 1982 funding.
White River Basin Reservoirs, AR & MO	Completed with FY 1982 funding.
AE&D Projects:	
Arkansas-Red River Basins Chloride Control, OK, TX & KS	Completed with FY 1982 funding.
Neches River & Tributaries Salt Water Barrier at Beaumont, TX	Deferred pending determination of local cooperation requirements.

Studies/Projects Which Were Funded With FY 1982 Appropriations, But Were Not Included In The FY 1983 Budget Request

Study/Project Name	Remarks
Norfolk Lake Power Units 3 & 4, AR	Completed with FY 1982 funding.
Rio Grande Floodway-Truth or Consequences Unit, NM	Low priority needs.
Santa Fe River & Arroyo Mascaras, NM	Low priority needs.
Construction Projects:	
Lavon Lake Modification & East Fork Channel Improvement, TX	Completed with FY 1982 funding.
Lewisville Dam, TX (Rehab)	Completed with FY 1982 funding.
Pearson-Skubitz, Big Hill Lake, KS	Completed with FY 1982 funding.
Santa Rosa Lake, NM	Completed with FY 1982 funding.
Texas City Channel, TX (Industrial Canal)	Completed with FY 1982 funding.
Waurika Lake, OK	Completed with FY 1982 funding.

DELAYS DUE TO LITIGATION

Chairman HATFIELD. Please provide for the record a list of those projects included in the 1982 budget request that are currently being delayed because of litigation, including a brief report on the nature and schedule for resolving the legal issues in dispute.

General BRATTON. Yes, sir.

[The information follows:]

Cooper Lake and channels, Texas.—The Cooper Lake project has been permanently enjoined until deficiencies in the 1977 environmental impact statement are corrected. The final supplemental EIS has been filed with the Environmental Protection Agency who published its notice of availability in the Federal Register on March 27, 1981. A motion to dissolve the injunction has been filed with the court, but a hearing time has not been set.

Lake Pontchartrain and vicinity, Louisiana.—On December 30, 1977, construction of the Chef Menteur and Rigolets complexes portion of the project were enjoined until a revised environmental impact statement was prepared. Preliminary alternative plan studies and environmental investigations indicate a high-level alternative of raising protection levels instead of pursuing the authorized barrier plan of protection may be more environmentally acceptable and more economically feasible. A public meeting was held in November 1982 to seek public comment on the tentatively selected high-level plan. These comments are under review. A revised environmental impact statement for the high-level plan could be filed with the Environmental Protection Agency in the first quarter of fiscal year 1984. Should the barrier plan be recommended, the revised environmental impact statement would be filed in the first quarter of fiscal year 1986.

Libby additional units and reregulating dam, Montana.—This project was permanently enjoined by the U.S. Court of Appeals for the Ninth Circuit, which held that the reregulating dam had not been authorized by Congress within the meaning of 33 USC 401. The court also ruled that appropriations for the dam's construction were not sufficient to constitute congressional authorization for the project. For budgetary purposes, Libby additional units and the reregulating dam have been separated into two projects. Construction is proceeding on portions of the Libby additional units project but has been stopped on the reregulating dam project.

Missouri River levee system, Iowa, Nebraska, Kansas, and Missouri.—In September 1978, a court decision was rendered in favor of the Watershed Associates Reserve for a restraining order halting construction of unit R-616. Court hearings were initiated in February 1982. A decision resulting from these hearings has not been rendered to date.

New Melones Lake, Calif.—Litigation does not affect Corps construction and work on the project is continuing. A court decision is pending on appeals made by the State of California Resources Control Board and the Federal Government following the U.S. district court ruling in March 1981 permitting filling of the reservoir for the purpose of generating electric power but not for agriculture or other purposes. Litigation involves the board's decision 1422 (April 1973) which established conditions that impacted on the planned filling and operating of the project by the Department of the Interior.

Papillion Creek and tributaries lakes, Nebraska.—The injunction on site 10, granted to the Papillion Valley Preservation Association, remains in effect pending Corps recommendations on sites 3A and 10 and submission of final environmental impact statement to the Environmental Protection Agency.

Stockton Lake, Mo.—State of Missouri and 10 landowners are seeking to enjoin construction of improvements located downstream of Stockton Lake. Court denied plantiff's motion for temporary restraining order. On December 24, 1980, the court dismissed all counts. An appeal was made to the Eighth Circuit Court of Appeals. The court heard arguments on November 12, 1981, and the Corps is now awaiting a decision.

Tennessee-Tombigbee Waterway, Alabama and Mississippi.—Pending filing of a supplemental environmental impact statement as directed by the Fifth Circuit Court of Appeals, an agreement regarding construction has been approved by the district court. Work has been suspended on the Aberdeen Reservoir clearing contract and rescheduled on five other contracts which have restrictions in specific areas. This has not impacted on the overall project completion date and all other construction activities are proceeding as scheduled.

West Tennessee tributaries, Tennessee.—Revision of the environmental impact statement for this project, enjoined in 1978, should be completed in late 1982. Construction is continuing on one levee item not enjoined.

NEW CONTRACT AWARDS

Chairman HATFIELD. General, could you provide for the record the new contracts the Corps plans to award in the last quarter of the fiscal year 1982, including, by project, the estimated funding requirement, a brief description of work, the estimated award date, and other data similar to that provided in last year's hearing? The committee would also like to have the same information for new contract awards scheduled for fiscal year 1983. Could you please provide that for the record as well?

General GAY. Yes, sir.

[The information follows:]

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE LOWER MISSISSIPPI VALLEY DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1982 Requirement $000	FY 1983 Requirement $000	Balance to Complete $000
Clarence Cannon Dam and Mark Twain Lake, MO			(569)	(384)	(129)	(56)
	Hunnewell Water Supply Relocation	Jul 1982	223	38	129	56
	Recreation Facility Access Area and Water Supply	Jul 1982	346	346	0	0
Grand Isle and Vicinity, LA			(10,520)	(670)	(6,200)	(3,650)
	Dune Construction	Aug 1982	10,520	670	6,200	3,650
Larose to Golden Meadow, LA (Hurricane Prot)			(2,240)	(75)	(1,100)	(1,065)
	Levee, Section F, 1st Lift	Aug 1982	2,240	75	1,100	1,065
McGee Creek Drainage and Levee District, IL			(7,680)	(200)	(5,722)	(1,758)
	River Front Levee	Aug 1982	7,680	200	5,722	1,758
Total Lower Mississippi Valley Division			21,009	1,329	13,151	6,529

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR MISSISSIPPI RIVER AND TRIBUTARIES

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1982 Requirement $000	FY 1983 Requirement $000	Balance to Complete $000
Atchafalaya Basin, LA			(9,637)	(10)	(3,000)	(6,627)
	E-36.0 Levee Enlargement	Sep 1982	9,637	10	3,000	6,627
Channel Improvement, AR, IL, KY, LA, MS, MO & TN			(6,666)	(1,651)	(5,015)	(0)
	Stone Bank Paving-Revetment Program	Sep 1982	394	394	0	0
	Stone Bank Paving-Revetment Program	Aug 1982	2,385	10	2,375	0
	Tarpley Cutoff, MS-M540R-No. 1 Dike	Jul 1982	400	400	0	0
	Leland Bar, MS & AR-M539R-No. 1 Dike	Jul 1982	685	685	0	0
	Below Racetrack, MS-M431L-No. 2 Dike	Aug 1982	1,002	162	840	0
	Below Island 9, TN-Dike	Sep 1982	1,800	0	1,800	0

Mississippi River Levees, AR,IL,KY,LA, MS,MO & TN						
	Louisiana Jackson Floodwall-M98.2 to 97.2L	Aug 1982	(8,600) 8,600	(294) 294	(4,000) 4,000	(4,306) 4,306
Old River, LA			(1,891)	(10)	(1,881)	(0)
	Aux Structure-Construction Highway 15 (Relocations)	Sep 1982	1,891	10	1,881	0
Total Mississippi River and Tributaries			26,794	1,965	13,896	10,933

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE MISSOURI RIVER DIVISION

Blue River Channel, MO						
	Railroad relocation KCS Stage 2, phaseII	Jul 1982	(1,500) 1,500	(40) 40	(600) 600	(860) 860
Long Branch Lake, MO						
	Recreation Facilities - Remaining	Aug 1982	(4,189) 4,189	(227) 227	(970) 970	(2,992) 2,992
Great Falls, MT.						
	Levees & Channels, Sun River	Sep 1982	(6,865) 6,865	(109) 109	(3,689) 3,689	(3,067) 3,067
Harry S. Truman Dam & Reservoir, MO						
	Cemeteries, utilities & structures - St. Clair Co. Jail	Sep 1982	(355) 355	(50) 50	(305) 305	(0) 0
Total Missouri River Division			12,909	426	5,564	6,919

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE NORTH CENTRAL DIVISION

Bettendorf, IA						
	21st St. Pumping Plant-Stage II	Sep 1982	(1,610) 1,610	(0) 0	(900) 900	(710) 710
Milan, Il			(4,057)	(1,120)	(1,940)	(997)
	Levees & Floodwalls Stage IIIB	Aug 1982	3,180	1,120	1,380	680
	Two Pumping Plants	Sep 1982	877	0	560	317
Rockford, IL			(420)	(280)	(140)	(0)
	South Branch Diversion Channel, Unit B, Stage IIIA	Jul 1982	420	280	140	0
Total North Central Division			6,087	1,400	2,980	1,707

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE NORTH PACIFIC DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1982 Requirement $000	FY 1983 Requirement $000	Balance to Complete $000
Bonneville Second Powerhouse, OR & WA			(20,538)	(2,293)	(16,147)	(2,098)
	Downstream By-Pass Facility, Phase II	Aug 1982	10,082	514	8,640	928
	Fish Collection Monitoring Facilities Permanent	Jul 1982	2,005	534	301	1,170
	Trash Removal System	Jul 1982	7,282	1,050	6,232	0
	Bradford Island	Jul 1982	1,169	195	974	0
Chena River Lakes, AK			(300)	(300)	(0)	(0)
	Bridge Repair	Jul 1982	200	200	0	0
	Miscellaneous Repair	Jul 1982	100	100	0	0
Chief Joseph Additional Units, Wa			(250)	(25)	(225)	(0)
	Renovate Admin Bldg.	Sep 1982	250	25	225	0
Dworshak Dam & Reservoir, ID			(350)	(100)	(250)	(0)
	System #1 Mineralization	Aug 1982	350	100	250	0
Lake Washington Ship Canal, Washington			(3,980)	(580)	(1,490)	(1,910)
	Emergency Closure System	Jul 1982	3,375	300	1,165	1,910
	Maintenance Pier	Jul 1982	605	280	325	0
Lower Snake Fish & Wildlife Compensation, WA, OR, & ID			(150)	(150)	(0)	(0)
	Barge Loading Facility	Jul 1982	150	150	0	0
Willow Creek Lake, Heppner, OR			(110)	(20)	(90)	(0)
	Alfalfa Street Bridge	Aug 1982	110	20	90	0
North Pacific Division Totals			25,678	3,468	18,202	4,008

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE OHIO RIVER DIVISION

Alum Creek Lake, OH			(300)	(300)	(0)	(0)
	Road Relocations - Remedial Work	Jul 1982	300	300	0	0
Locks and Dam 52, IL & KY			(204)	(100)	(63)	(41)
	Stone Protection	Jul 1982	204	100	63	41
Smithland Locks & Dam, IL, IN & KY			(206)	(0)	(206)	(0)
	Paving Access Road	Jul 1982	206	0	206	0

Southwestern Jefferson County, KY			(8,653)	(865)	(4,012)	(3,776)
	Levee Section 4	Jul 1982	7,806	800	3,430	3,576
	Greenwood Road & Flume Repairs	Jul 1982	207	65	142	0
	Power Service for Pond Creek Pump Plant	Sep 1982	640	0	440	200
Stonewall Jackson Lake, WV			(4,850)	(500)	(1,200)	(3,150)
	Relocate U.S. Rt. 19, Sec. 3 (WV Rt. 23)	Jul 1982	4,850	500	1,200	3,150
Taylorsville Lake, KY			(1,654)	(215)	(960)	(479)
	Relocate Anderson Co. Rd. - Site A-2	Jul 1982	459	100	300	59
	Relocate Nelson - Anderson Co. Road - Site NA-1	Jul 1982	726	55	520	151
	Permanent Exhibits at Visitors Center	Aug 1982	469	60	140	269
Total Ohio River Division			15,867	1,980	6,441	7,446

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE SOUTH ATLANTIC DIVISION

Tampa Harbor, Main Channel, Florida			(14,319)	(0)	(8,865)	(5,454)
	Dredging bay channel part cuts E and F	Aug 1982	14,319	0	8,865	5,454
Cooper River, Charleston Harbor, South Carolina			(232)	(0)	(222)	(10)
	Power plant microwave facility	Aug 1982	232	0	222	10
Central and Southern Florida			(626)	(0)	(240)	(386)
	Levee and flood control structures	Sep 1982	626	0	240	386
Tombigbee River and Tributaries, Mississippi and Alabama			(200)	(0)	(200)	(0)
	Erosion control at highway bridge	Sep 1982	200	0	200	0
Falls Lake, North Carolina			(6,886)	(45)	(6,113)	(728)
	Sanderling Beach recreation area	Sep 1982	6,886	45	6,113	728
Richard B. Russell Dam and Lake, Georgia and South Carolina			(11,360)	(450)	(5,350)	(5,560)
	Road relocation	Jul 1982	200	100	100	0
	Reservoir oxygenation	Aug 1982	9,946	100	5,000	4,846
	Powerplant equipment	Jul 1982	1,214	250	250	714
Total South Atlantic Division			33,623	495	20,990	12,138

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE SOUTH PACIFIC DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1982 Requirement $000	FY 1983 Requirement $000	Balance to Complete $000
San Francisco Bay to Stockton, CA (John F. Baldwin and Stockton Ship Channels			(7,200)	(250)	(2,500)	(4,450)
	Channel Dredging	Jul 1982	7,200	250	2,500	4,450
Indian Bend Wash, AZ			(7,431)	(735)	(5,664)	(1,032)
	Channel Construction	Jul 1982	7,431	735	5,664	1,032
Total South Pacific Division			14,631	985	8,164	5,482

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1982 FOR THE SOUTHWESTERN DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1982 Requirement $000	FY 1983 Requirement $000	Balance to Complete $000
Arcadia Lake, OK			(23,548)	(650)	(9,808)	(13,090)
	Oklahoma County Roads	Jul 1982	4,328	650	3,225	453
	Embankment & Spillway	Sep 1982	19,220	0	6,583	12,637
Arkansas-Red River Basins Chloride Control, TX (Area VIII)			(1,202)	(0)	(1,009)	(193)
	Knox County Roads	Sep 1982	1,202	0	1,009	193
Corpus Christi Ship Channel, TX			(11,260)	(300)	(2,000)	(8,960)
	Channel, Beacon 82 to Corpus Christi and Chemical Turning Basins	Aug 1982	11,260	300	2,000	8,960
Skiatook Lake, OK			(328)	(100)	(228)	(0)
	Plug Oil and Gas Wells	Aug 1982	328	100	228	0
Texas City and Vicinity, TX Hurricane-Flood Protection	Construct La Marque levees and Pumping Plant	Jul 1982	(4,961)	(691)	(4,270)	(0)
			4,961	691	4,270	0
Vince and Little Vince Bayou, TX	Little Vince Bayou-Mile 0.0 to Mile 0.7	Aug 1982	(940)	(235)	(705)	(0)
			940	235	705	0
Total Southwestern Division			42,239	1,976	18,020	22,243
GRAND TOTAL ALL DIVISIONS			198,837	14,024	107,408	77,405

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE LOWER MISSISSIPPI VALLEY DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Clarence Cannon Dam and Mark Twain Lake, MO			(1,217)	1,120)	(97)
	Monroe Road Relocation	Nov 1982	980	910	70
	County Road Barricades	Apr 1983	237	210	27
East St. Louis and Vicinity, IL			(6,780)	(1,435)	(5,345)
	Pumping Plants	Mar 1983	6,780	1,435	5,345
Kaskaskia Island Drainage and Levee District, IL			(7,266)	(1,250)	(6,016)
	First Levee Contract	Jun 1983	6,063	950	5,113
	Second Levee Contract	Jul 1983	1,203	300	903
Kaskaskia River Navigation, IL			(17,195)	(1,480)	(15,715)
	Canal Excavation Mile 28.9 to 32.3	Apr 1983	17,195	1,480	15,715
Lake Pontchartrain, LA and Vicinity (Hurricane Prot.)			(10,950)	(8,275)	(2,675)
	Levee Enlargement Station 705 to 945	Apr 1983	1,000	500	500
	Levee 3rd Lift Station 945 to 1,117	Dec 1982	6,050	4,730	1,320
	Levee 2nd Lift Pipeline Canal	Dec 1982	3,900	3,045	855
Larose to Golden Meadow, LA (Hurricane Prot.)			(9,442)	(2,500)	(6,942)
	South Levee, Section E, 1st Lift	Jul 1983	2,573	400	2,173
	Larose Floodgate and Floodwall	Dec 1982	5,086	2,000	3,086
	Larose Floodwall	Jul 1983	1,783	100	1,683

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE LOWER MISSISSIPPI VALLEY DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Mississippi River between the Ohio and Missouri Rivers (Regulating Works)			(2,087)	(1,027)	(1,060)
	Revetment Mile 111.1 to 109.9	Feb 1983	710	390	320
	Revetment Mile 94.3 to 93.0	May 1983	810	370	440
	Rock Removal Mile 38.6 to 38	Aug 1983	567	267	300

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR LOWER MISSISSIPPI VALLEY DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
New Orleans to Venice, LA (Hurricane Prot.)			(4,547)	(700)	(3,847)
	Levee Enlargement Station 0 to 170 (Reach B-1)	Jun 1983	1,904	400	1,504
	Floodwall by Grand Laird Pump Station (Reach B-1)	Jul 1983	2,643	300	2,343
Ouachita and Black Rivers, AR and LA			(2,721)	(1,345)	(1,376)
	Felsenthal Lock & Dam-Remove Existing Structures	Apr 1983	620	231	389
	Felsenthal Lock & Dam-Landscaping	Dec 1982	211	211	0
	Felsenthal Lock & Dam-Miscellaneous Equipment	Jul 1983	243	75	168
	Calion Lock & Dam-Remove Existing Structures	Mar 1983	773	288	485
	Calion Lock & Dam-Channel Dredging	Jul 1983	589	255	334
	Calion Lock & Dam-Miscellaneous Equipment	Oct 1982	285	285	0
Wood River Drainage and Levee District, IL			(2,700)	(600)	(2,100)
	Levee Raise Closure Structure	May 1983	2,700	600	2,100
Total Lower Mississippi Valley Division			64,905	19,732	45,173

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR MISSISSIPPI RIVER AND TRIBUTARIES

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Atchafalaya Basin, LA			(40,274)	(9,913)	(30,361)
	W-85.0B Levee Enlargement 1st Lift Sta.4386-4502	Oct 1982	2,780	1,400	1,380
	Berwick Floodwall and relocations	Jan 1983	17,462	3,553	13,909
	E-84 Sanddrain Levee Enlargement-2nd Lift	Mar 1983	160	160	0
	Morgan City Floodwall	Oct 1982	19,872	4,800	15,072
Channel Improvement, AR, IL, KY, LA, MS, MO & TN			(4,625)	(600)	(4,025)
	Stone Bank Paving-Revetment Program	Sep 1983	425	0	425
	Stone Bank Paving-Revetment Program	Aug 1983	2,000	0	2,000
	Robinson Bayou-Dike	Sep 1983	600	0	600
	Below Knowlton, AR-Dike	Sep 1983	1,000	0	1,000
	Tarpley Cutoff, MS-Dike	Jul 1983	400	400	0
	Leland Bar, MS-AR-Dike	Jul 1983	200	200	0

Lower Red River-South Bank Levees, LA			(1,500)	(300)	(1,200)
	Hot-Wells Scott Home Levee Enlargement	Jul 1983	1,500	300	1,200
Mississippi River Levees, AR, IL, KY, LA, MS, MO & TN			(36,468)	(13,102)	(23,366)
	Canal-Toulouse Floodwall-RR Relocation	Aug 1983	282	110	172
	Louisiana-Jackson Floodwall-M99 to 98L.-RR Relocation	Oct 1982	109	109	0
	Canal-Toulouse Floodwall-M95 to 94.6L.-Utility Relocation	Aug 1983	658	144	514
	Louisiana-Jackson Floodwall-Utility Relocation	Oct 1982	134	102	32
	Porter Lake, AR-Berm	Nov 1982	532	532	0
	Grand Lake-Stateline, AR-Item 507-P-Levee	Oct 1982	2,000	2,000	0
	Stateline-Wilson Point-Item 501 R-Levee	Oct 1982	7,621	2,000	5,621
	Stateline-Wilson Point-Item 503 R-Levee	Oct 1982	6,380	2,250	4,130
	Waterproof, LA-Berm	Oct 1982	3,151	1,500	1,651
Mississippi River Levees, AR, IL, KY, LA, MS, MO & TN (CONT'D)					
	Pontchartrain Levee District-M 213 to 203 L	Oct 1982	2,330	1,300	1,030
	Canal-Toulouse Floodwall-M94.9 to 94.6 L	Aug 1983	3,330	250	3,080
	Convent, LA-Levee	May 1983	3,580	398	3,182
	Valewood-Carlisle-Item 498L	Oct 1982	3,715	1,414	2,301
	Caruthersville Berm-Item R-846	Apr 1983	1,840	600	1,240
	Nash, MO-Relief Wells Channel	Jun 1983	806	393	413
Mud Lake Pumping Sta, TN			(1,290)	(125)	(1,165)
	Pumps-Supply	~~Oct~~ 1983	1,290	125	1,165
Old River, LA			(185,077)	(45,821)	(139,256)
	Construct Auxiliary Structure, Levees & Channel	Oct 1982	185,077	45,821	139,256
Reelfoot Lake-Lake No. 9, KY & TN			(349)	(120)	(229)
	Item 2, Above Lake No. 9-Parcel 2-Channel work	Jul 1983	349	120	229
St. Francis Basin, AR & MO			(2,023)	(1,703)	(320)
	Ditch 27 and Tributaries-Item 2-Channel work	Feb 1983	250	250	0
	Township Road Castor River-M7.85, MO-Road Relocations	Oct 1982	333	333	0
	Railroad Bridge Castor River-Item 1-Relocations	Jan 1983	379	379	0
	Item 1-Castor River-Parcel 2-Channel Work	Nov 1982	591	591	0
	Ditch 19-Archaelogical Salvage-Sta.1080,1520,1527	Mar 1983	470	150	320

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR MISSISSIPPI RIVER AND TRIBUTARIES

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Teche-Vermilion Basin, LA			(459)	(459)	(0)
	Courtableau Borrow Pit Control Structure	Oct 1982	459	459	0
Tensas Basin, AR & LA			(925)	(925)	(0)
	Six Mile Bayou, LA-Culvert, channel and drainage structure	Oct 1982	925	925	0
West Tennessee Tributaries, TN			(3,395)	(695)	(2,700)
	Menglewood Item 1-Parcel 3-M19.9 to 27.5	Apr 1983	3,395	695	2,700
Yazoo Basin, MS			(6,219)	(1,550)	(4,669)
	Pelucia Creek Levees	Mar 1983	4,342	1,350	2,992
	3 Leflore County Bridges-Relocations	Apr 1983	1,877	200	1,677
Total Mississippi River and Tributaries			282,604	75,313	207,291

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE MISSOURI RIVER DIVISION

Little Blue River Lakes, MO			(5,349)	(325)	(5,024)
	Reservoir Clearing, Blue Springs Lake	Mar 1983	385	120	265
	Road Relocations, Woods Chapel Rd. Phase II	Jul 1983	4,964	205	4,759
Chatfield Lake, CO			(2,673)	(1,692)	(981)
	Stage I Channels	Nov 1982	466	466	0
	Stage II Channels	Apr 1983	2,207	1,226	981
Missouri River Levee System, IA, KS NE, MO			(3,305)	(1,680)	(1,625)
	Stage 3 Levees	Oct 1982	3,305	1,680	1,625
Papillion Creek & Tributaries Lakes, NE			(7,712)	(1,967)	(5,745)
	Relocations Douglas Co. Road (Site 18)	Jan 1983	1,280	300	980
	Relocations MUD Utilities (Site 18)	Jan 1983	182	119	63
	Reservoir Revegetation (Site 18)	Mar 1983	626	48	578
	Dam & Structure, Reservoir Clearing, etc. (Site 18)	Nov 1982	5,624	1,500	4,124
Harry S. Truman Dam & Reservoir, MO			(628)	(12)	(616)
	Buildings, Grounds & Utilities - Maintenance & Storage Building Alteration	Sep 1983	628	12	616
Stockton Lake, MO.			(916)	(916)	0
	Construct Bridge, Road & Cut Off	Dec 1982	916	916	0
Total Missouri River Division			20,583	6,592	13,991

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE NORTH ATLANTIC DIVISION

New York Harbor Collection and Removal of Drift, NY & NJ			(4,230)	(1,900)	(2,330)
	Elizabeth, NJ	Oct 1982	4,230	1,900	2,330
Wyoming Valley, PA			(3,110)	(1,990)	(1,120)
	Weighted Filter Drains - Kingston/Forty Fort	Jun 1983	1,830	1,090	740
	Sheet Piling	Jun 1983	1,280	900	380
Total North Atlantic Division			7,340	3,890	3,450

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE NORTH CENTRAL DIVISION

Bettendorf, IA			(8,920)	(550)	(8,370)
	Levee, Floodwall and Pump Plant Construction	Mar 1983	8,920	550	8,370
Big Stone Lake and Whetstone River, MN & SD			(2,774)	(188)	(2,586)
	Big Stone Lake Outlet Structure and MN River Channel	Apr 1983	2,774	188	2,586
Illinois Waterway-Lockport Lock, IL			(8,860)	(60)	(8,800)
	Replacement and Modification of Lock Gates & Machinery	Aug 1983	8,860	60	8,800
Milan, IL			(588)	(234)	(354)
	CRI&P Railroad Bridge Relocation, Stage I	Apr 1983	588	234	354
Presque Isle Peninsula, Erie, PA			(1,570)	(1,570)	(0)
	Beach Nourishment	Mar 1983	1,570	1,570	0
Saylorville Lake, IA			(2,640)	(1,230)	(1,410)
	Recreation Facilities Floodway Corridor Stage II	Mar 1983	2,640	1,230	1,410
Waterloo, IA			(3,050)	(0)	(3,050)
	Channel & Levee Blowers Creek, Unit C, Stage VG	Sep 1983	3,050	0	3,050
Winona, MN			(2,058)	(394)	(1,664)
	Burns Valley Creek Channel Reach E-3 and Utility Relocation	Apr 1983	2,058	394	1,664
Total North Central Division			30,460	4,226	26,234

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE NEW ENGLAND DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Fall River Harbor, MA & RI			(38,100)	(3,380)	(34,720)
	Dredge Tiverton and Mt. Hope Bay Channels	Apr 1983	38,100	3,380	34,720
Total New England Division			38,100	3,380	34,720

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE NORTH PACIFIC DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Bonneville Second Powerhouse, OR & WA			(7,022)	(1,924)	(5,098)
	Hamilton Island	Mar 1983	2,670	1,068	1,602
	Cascade Island	Jun 1983	2,692	524	2,168
	North Shore Area	Jun 1983	1,660	332	1,328
Chena River Lakes, AK			(86,809)	(4,229)	(82,580)
	Armour Protection	Dec 1982	1,000	1,000	0
	Levee Protection	May 1983	85,809	3,229	82,580
Chief Joseph Additional Units, WA			(5,980)	(3,030)	(2,950)
	Project Completion Works	Aug 1983	1,500	400	1,100
	Project Roads & Utilities (Multi Component)	Dec 1982	1,630	955	675
	Curation (cultural resources)	Jun 1983	415	325	90
	Visitors Center	Dec 1982	610	370	240
	Project Signs	Mar 1983	250	250	0
	Maint. & Storage Facility	Oct 1982	775	330	445
	Powerhouse Shops	Oct 1982	800	400	400
Dworshak Dam & Reservoir, ID			(471)	(471)	(0)
	Generator Coupling Deficiency	Oct 1982	221	221	0
	Freeman Creek Road, striaghten curves	Oct 1982	250	250	0
John Day Lock & Dam - Lake Umatilla, OR & WA			(14,214)	(2,574)	(11,640)
	Fingerling collection channel	Apr 1983	14,214	2,574	11,640
Lake Washington Ship Canal, Washington			(1,975)	(970)	(1,005)
	East Guide & Small Lock Waiting Pier	Oct 1982	330	330	0
	Downstream Guard Gate Rehab	Oct 1982	1,435	430	1,005
	Cut Slots Downstream of Guard Gate	Jan 1983	210	210	0

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE NORTH PACIFIC DIVISION

Libby Additional Units, MT			(129)	(60)	(69)
	Turbines & Installation (F2-2)	Jul 1983	129	60	69
Lower Columbia River Basin Bank Protection, OR & WA			(2,175)	(1,665)	(510)
	Cash Dollar Location	Jun 1983	300	300	0
	White Location	Jun 1983	600	275	325
	Janice Location	Jun 1983	600	600	0
	Frazier Location	Jun 1983	375	190	185
	Waris Location	Jun 1983	300	300	0
Lower Granite Lock & Dam, WA			(1,266)	(1,266)	0
	Lewiston Water Intake Modification	Dec 1982	341	341	0
	Trash Shear Boom	Nov 1982	614	614	0
	N/L Floor Slabs	Apr 1983	140	140	0
	Additional Levee & Irrigation Service	Dec 1982	171	171	0
Lower Snake Fish & Wildlife Compensation, WA, OR & ID			(37,384)	(14,819)	(22,565)
	Lyons Ferry Satellite Rearing PH I	Oct 1982	1,118	1,118	0
	Lyons Ferry Hatchery PH II	Jan 1983	6,804	4,500	2,304
	Lyons Ferry Satellite Trap Spawn	Mar 1983	2,681	700	1,981
	Sawtooth Spring Chinook Hatchery	Dec 1982	15,213	4,525	10,688
	Irrigon Steelhead Hatchery	Dec 1982	11,292	3,700	7,592
	Irrigon Housing	Jun 1983	276	276	0
Mill Creek Lake, WA			(2,535)	(2,437)	(98)
	Additional Slope Protection	Mar 1983	1,220	1,220	0
	Yellowhawk Diversion	Mar 1983	760	662	98
	Return Canal	Oct 1982	555	555	0
Willamette River Bank Protection, OR			(2,689)	(2,250)	(439)
	Hubbard Location	Jun 1983	700	600	100
	Bass Location PH II	Jun 1983	800	700	100
	Stayton Location	Jun 1983	1,189	950	239
Total North Pacific Division			162,649	35,695	126,954

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE OHIO RIVER DIVISION

Big South Fork, KY & TN			(8,851)	(1,821)	(7,030)
	Bandy Creek Road and Recreation Facility	Jan 1983	8,851	1,821	7,030
Burnsville Lake, WV			(450)	(315)	(135)
	Building, Grounds & Utilities	Mar 1983	450	315	135

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE OHIO RIVER DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Cave Run Lake, KY			(650)	(200)	(450)
	Remedial Work - Control Tower	Jul 1983	650	200	450
Chillicothe, OH			(940)	(940)	(0)
	Recreation	Oct 1982	940	940	0
Evansville, IN			(2,761)	(300)	(2,461)
	Diamond Ave. & Stringtown Rd. - Pumps	Mar 1983	2,761	300	2,461
Levee Unit 5, IN			(224)	(128)	(96)
	Power Service for Coffee Bayou Pump Plant	Jul 1983	224	128	96
Locks and Dam 52, IL & KY			(159)	(100)	(59)
	Install Miter Gate	May 1983	159	100	59
Locks and Dam 53, IL & KY			(1,600)	(278)	(1,322)
	Repair Beartraps & Leaves & Install Machinery	Jun 1983	1,600	278	1,322
Mill Creek, OH			(2,087)	(900)	(1,187)
	Modify Railroad Bridge, Sec. 3	Mar 1983	2,087	900	1,187
Muskingum River Lakes, OH (Dam Safety)			(11,220)	(650)	(10,570)
	Charles Mill	Jul 1983	5,900	150	5,750
	Pleasant Hill	Jun 1983	5,320	500	4,820
Muskingum River Lakes, OH (Major Rehabilitation)			(11,925)	(1,300)	(10,625)
	Stabilize Mohawk Dam - Part 2	Jun 1983	6,685	400	6,285
	Stabilize Pleasant Hill Dam	Mar 1983	5,240	900	4,340
Smithland Locks and Dam, IL, IN & KY			(464)	(170)	(294)
	Boat Ramps, Road & Parking - Givens Creek, KY	May 1983	464	170	294
Stonewall Jackson Lake, WV			(22,430)	(3,950)	(18,480)
	Relocate WV Rt. 30 & Associated Roads	Aug 1983	11,500	300	11,200
	Cemeteries Relocation - Phase 2	Oct 1982	300	150	150
	Relocate Equit. Gas Company Phase II Piping	Jul 1983	1,400	250	1,150
	Relocate Equit. Gas Company Access Roads	Jul 1983	4,000	750	3,250
	Utilities Associated with Rt. 30, Sec. 2 & 3 (Misc.)	Oct 1982	420	400	20
	Consolidated Gas Supply Corp. Relocation (Misc.)	Oct 1982	1,300	400	900
	Monongahela Power Co. Relocation (Misc.)	Apr 1983	325	100	225
	Chesapeake & Potomac Telephone Relocation (Misc.)	Apr 1983	460	100	360
	Well Plugging (Misc.)	Apr 1983	725	100	625
	Fabricate Dam Sluice Gates	Oct 1982	2,000	1,400	600

Taylorsville Lake, KY		(8,066)	(3,600)	(4,466)
Relocate KY Highway 44 - Site K-1	Nov 1982	4,297	1,890	2,407
Settlers Trace Recreation Area - Phase II	Mar 1983	3,594	1,535	2,059
Utilities	Oct 1982	175	175	0
Total Ohio River Division		71,827	14,652	57,175

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE PACIFIC OCEAN DIVISION

Barbers Point (Deep Draft) Harbor, HI		(1,000)	(500)	(500)
Project Beautification	Feb 1983	1,000	500	500
Total Pacific Ocean Division		1,000	500	500

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE SOUTH ATLANTIC DIVISION

Tennessee-Tombigbee Waterway, Alabama and Mississippi		(74,379)	(33,391)	(40,988)
Columbus railroad relocation	Oct 1982	5,100	3,400	1,700
Lock B railroad relocation	Oct 1982	14,635	5,018	9,617
Lock C utility relocation for TVA	May 1983	1,240	992	248
Lock C utility relocation for Tombigbee EPA	May 1983	390	312	78
Demopolis and Gainesville channel cleanup	Oct 1982	3,130	2,135	995
Aberdeen Lock and Dam second contract	Oct 1982	14,920	6,887	8,033
Lock A railroad relocation	Oct 1982	30,690	10,373	20,317
Bay Springs reservoir clearing area B	Oct 1982	458	458	0
Bay Springs reservoir clearing area C	Oct 1982	550	550	0
Bay Springs tow mooring facilities	Oct 1982	1,919	1,919	0
Divide Cut erosion control and stabilization	Oct 1982	1,347	1,347	0
Canaveral Harbor, Florida		(12,226)	(900)	(11,326)
Dredging harbor extension	Jul 1983	12,226	900	11,326
Tampa Harbor, Main Channel, Florida		(25,746)	(5,400)	(20,346)
Dredging bay channel cuts C, D, and part E	Feb 1983	25,746	5,400	20,346
AIWW-Replacement of Federal Highway Bridges, North Carolina		(19,169)	(4,333)	(14,836)
Coinjock bridge replacement	Jan 1983	19,169	4,333	14,836
Manteo (Shallowbag) Bay, North Carolina		(91,638)	(762)	(90,876)
Jetty construction at Oregon Inlet	Aug 1983	(91,638	762	90,876
Cooper River, Charleston Harbor, South Carolina		(1,266)	(1,266)	(0)
Power plant emergency bypass	Oct 1982	1,266	1,266	0
Little River Inlet, South Carolina and North Carolina		(1,145)	(0)	(1,145)
Dredging inner channel	Sep 1983	1,145	0	1,145

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE SOUTH ATLANTIC DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
Central and Southern Florida			(15,310)	(5,025)	(10,285)
	Herbert Hoover dike and revetment	Oct 1982	4,015	850	3,165
	Hendry County channels and flood control structures	Oct 1982	4,125	1,435	2,690
	Additional Hendry County channels and flood control structures	Oct 1982	7,170	2,740	4,430
Dade County, Florida			(4,100)	(1,850)	(2,250)
	Beach renourishment north portion	Jun 1983	4,100	1,850	2,250
Four River Basins, Florida			(4,500)	(2,650)	(1,850)
	Channel cleanup and shoal removal	Nov 1982	3,000	2,150	850
	Recreation facilities Flatwoods site	Feb 1983	1,500	500	1,000
Tombigbee River and Tributaries, Mississippi and Alabama			(4,340)	(635)	(3,705)
	Clearing and snagging Luxapalila Creek	Jul 1983	4,340	635	3,705
B. Everett Jordan Dam and Lake, North Carolina			(168)	(168)	(0)
	Access ramp to outlet works gate	Dec 1982	168	168	0
Falls Lake, North Carolina			(1,697)	(1,044)	(653)
	Recreation area at Highway 50 launch ramp	Jan 1983	866	560	306
	Operation and maintenance facilities	Mar 1983	831	484	347
Portugues and Bucana Rivers, Puerto Rico			(25,067)	(5,740)	(19,327)
	Upper Portugues channel section 6C	Nov 1982	6,138	3,151	2,987
	Upper Portugues channel section 7	Sep 1983	16,340	0	16,340
	Portugues test fill and quarry	Jan 1983	2,589	2,589	0
Jones Bluff Lock and Dam, Alabama			(175)	(100)	(75)
	Complete landscaping Cooters Pond - Gunter Hill	Aug 1983	175	100	75
Richard B. Russell Dam and Lake, Georgia and South Carolina			(41,892)	(6,417)	(35,475)
	Abbeville pump station relocation	Oct 1982	1,438	1,438	0
	Calhoun Falls pump station relocation	Oct 1982	945	945	0
	Tree topping and flotation removal in reservoir area	Aug 1983	3,017	200	2,817
	Pump storage turbine procurement	Oct 1982	32,791	3,000	29,791
	Remaining part of east access road	Oct 1982	701	334	367
	Underwater portion of recreation facilities	Oct 1982	3,000	500	2,500
Hartwell Lake, Georgia and South Carolina - Upper and Lower Diversion Dams (Rehabilitation)			(3,650)	(2,295)	(1,355)
	Upper dam rehabilitation	Dec 1982	3,650	2,295	1,355

Walter F. George Lock and Dam, Georgia and Alabama (Rehabilitation)			(26,000)	(6,975)	(19,025)
	Remaining cutoff wall	Jan 1983	26,000	6,975	19,025
Total South Atlantic Division			352,468	78,951	273,517

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE SOUTH PACIFIC DIVISION

San Francisco Bay to Stockton, CA (John F. Baldwin and Stockton Ship Channels)			(11,800)	(450)	(11,350)
	Channel Dredging	May 1983	11,800	450	11,350
Phoenix, AZ and Vicinity (Including New River) (Stage 2 and Remaining Work)			(10,922)	(1,072)	(9,850)
	Detention Basin, Access Road, Operating Equipment	Jul 1983	10,922	1,072	9,850
Cucamonga Creek, CA			(3,220)	(313)	(2,907)
	Project Beautification	Aug 1983	3,220	313	2,907
Dry Creek (Warm Springs) Lake and Channel, CA			(400)	(400)	(0)
	Bank Stabilization	Jun 1983	400	400	0
Sacramento River and Major and Minor Tributaries, CA			(185)	(185)	(0)
	Levee Revetment	Jun 1983	185	185	0
San Jacinto River Levee and Bautista Creek Channel, CA			(4,990)	(1,610)	(3,380)
	Levee Groins and Training Dike	Mar 1983	4,990	1,610	3,380
Total South Pacific Division			31,517	4,030	27,487

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE SOUTHWESTERN DIVISION

Aquilla Lake, TX			(1,265)	(1,265)	(0)
	Fencing	Dec 1982	395	395	0
	Revegetation - Part II	Oct 1982	870	870	0
Arcadia Lake, TX			(926)	(0)	(926)
	Clearing (Reservoir)	Sep 1983	491	0	491
	Fencing	Sep 1983	435	0	435
Arkansas-Red River Basins Chloride Control, TX (Area VIII)			(1,223)	(1,100)	(123)
	Lone Star Gas Co. Utilities	Oct 1982	120	109	11
	Fencing	Oct 1982	392	347	45
	Modification to Bateman Low Flow Dam	Oct 1982	711	644	67

NEW CONTRACT AWARDS SCHEDULED FOR FY 1983 FOR THE SOUTHWESTERN DIVISION

Project Name	Description of Work	Estimated Award Date	Contract Amount $000	FY 1983 Requirement $000	Balance to Complete $000
El Dorado Lake, KS			(4,465)	(1,438)	(3,027)
	Recreation structures facilities, and beautification and state office and maintenance buildings	Mar 1983	4,465	1,438	3,027
Lakeview Lake, TX			(25,485)	(6,250)	(19,235)
	Road 661	Jun 1983	2,000	250	1,750
	County Roads Pt II	Apr 1983	14,210	3,000	11,210
	County Roads Pt III	Aug 1983	3,200	400	2,800
	Relocation-Southern Pacific Railway	Nov 1982	5,470	2,400	3,070
	Fencing	May 1983	605	200	405
Ray Roberts Lake, TX			(27,683)	(3,040)	(24,643)
	Road 'A' (372)	Aug 1983	17,537	605	16,932
	Road 455 Pt I & II	Apr 1983	4,388	705	3,683
	Road 922	Jun 1983	2,875	300	2,575
	Denton County Roads	Jun 1983	1,143	215	928
	Cemetary-Bloomfield and Jones-Relocation	Jul 1983	205	120	85
	Enserch Pipeline-Relocation	Dec 1982	100	75	25
	Arco Pipeline-Relocation	Dec 1982	400	300	100
	Electrical Line Relocation	Sep 1983	195	20	175
	Boundary Fencing	Apr 1983	840	700	140
San Antonio Channel Imp., TX			(3,688)	(1,080)	(2,608)
	Excavation for Erosion Control	Jul 1983	3,688	1,080	2,608
Skiatook Lake, OK			(2,312)	(1,274)	(1,038)
	Reservoir Clearing	Oct 1982	2,312	1,274	1,038
Vince and Little Vince Bayou, TX			(5,100)	(1,017)	(4,083)
	Little Vince Bayou-Mile 0.7 to Mile 2.7	Apr 1983	5,100	1,017	4,083
Total Southwestern Division			72,147	16,464	55,683
GRAND TOTAL ALL DIVISIONS			1,135,600	263,425	872,175

Water Resource Development Costs and Benefits

Chairman Hatfield. Please provide for the record a tabulation by major function—hydro, flood control, navigation, water supply, et cetera—the cumulative investment to date, the replacement cost, and the benefits realized by the Federal Government in the way of, say, flood damages prevented, tons of commerce carried, and revenues generated by navigation of facilities; and power produced at Federal hydro projects and the value of that power compared to alternate sources.

General Gay. The Corps does not maintain a record of replacement costs for its projects and the only cumulative record the Corps keeps of total benefits and cost allocations to a project purpose is for flood control. Remaining costs are not segregated by project purpose. However, the following tabulation does provide quantitative benefits provided by completed projects in our investment program.

[The information follows:]

Flood control (billions):	
Flood damages prevented through fiscal year 1981	$100.2
Expenditures for flood control facilities	[1] $19.2
Navigation (million tons):	
Coast harbors and channels	1,194
Great Lakes harbors and channels	180
Inland and intracoastal waterways	623
Total	1,997
Water supply: Gallons of water supply storage (billions)	2,959
Water quality control: Storage capacity (million acre-feet)	1.1
Power:	
Installed capacity (million kilowatts)	18.8
Net generation (billion kilowatt-hours—1981)	77.3
Revenues (millions of dollars through fiscal year 1981)	$230.6
Recreation: Recreation-days (millions)	468
Total expenditures for all new work (1824–1981) (billions)	[2] $36

[1] Represents total initial investment cost for flood control, including the amount allocated to flood control in multipurpose power projects and the amount allocated to flood control in the Mississippi River and tributaries program.

[2] New work expenditures 1824–1935 estimated. No breakdown between new work and maintenance available for this period.

Fiscal Year 1983 Capabilities

Chairman Hatfield. The committee would like you to provide for the record a list showing the Corps' fiscal year 1983 capability for all studies, planning, and construction projects. The list should include the estimated Federal cost, allocations to date, the 1983 budget request, if any, and the 1983 capability.

General Bratton. Yes, sir. In providing the list, I would like to point out that the fiscal year 1983 capability amount is for the project or study considering this project or study by itself without reference to the rest of the program. However, it is emphasized that the total amount proposed for the Army's civil works program in the President's budget for fiscal year 1983 is the appropriate amount consistent with the administration's assessment of national priorities for Federal investments and the objectives of avoiding large budget deficits and the serious adverse effect that Government borrowing is having on the national economy. Therefore, while we could utilize additional funds on the project or study, offsetting reductions would be required in order to maintain our overall objectives. I should add that Assistant Secretary Gianelli has indicated that division and district engineers of the Army Corps of Engineers are not in a position to formulate realistic capabilities because they do not have available information relating to overall budget constraints and manpower levels.

[The information follows:]

STUDIES AVAILABLE FOR INITIATION

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
ALABAMA					
N	BAYOU LA BATRE, AL	274	0	0	80
	STATE SUB-TOTALS	274	0	0	80
ARKANSAS					
FDP	ARKANSAS RIVER - RUSSELLVILLE - MORRILTON, AR	820	0	0	200
N	LITTLE ROCK - NORTH LITTLE ROCK, AR (NAV STUDY)	850	0	0	150
	STATE SUB-TOTALS	1,670	0	0	350
CALIFORNIA					
N	SAN FRAN BAY & TRIBUTARY DEEPWATER PORTS (DREDGING), CA	555	0	0	250
N	SANTA CRUZ HARBOR, CA	105	0	0	105
N	WEST NEWPORT BEACH HARBOR, CA	320	0	0	80
	STATE SUB-TOTALS	980	0	0	435
COLORADO					
FDP	FOUNTAIN CREEK AND TRIBUTARIES, NORTH OF PUEBLO, CO	990	0	0	200
	STATE SUB-TOTALS	990	0	0	200
DELAWARE					
N	DELAWARE BAY, HARBOR OF REFUGE, DE	144	0	0	75
N	ROOSEVELT INLET, DE	215	0	0	100
	STATE SUB-TOTALS	359	0	0	175
DIST OF COLUMBIA					
FDP	WASHINGTON, DC, AND VICINITY	1,000	0	0	300
	STATE SUB-TOTALS	1,000	0	0	300
FLORIDA					
SP	BROWARD COUNTY, FL	310	0	0	50
N	CANAVERAL HARBOR, FL	250	0	0	50
N	ESCAMBIA RIVER, FL	438	0	0	105
N	JUPITER INLET, FL	293	0	0	50
N	PORT SULTON CHANNEL, FL	280	0	0	50
	STATE SUB-TOTALS	1,571	0	0	305
GEORGIA					
FDP	CURRY CREEK LAKE, GA (PHASE I)	1,939	0	0	380
FDP	METROPOLITAN MACON AREA, GA	1,076	0	0	250
FDP	SOUTH METROPOLITAN ATLANTA, GA	1,346	0	0	250
SP	ST. SIMONS ISLAND, GA	367	0	0	80
	STATE SUB-TOTALS	4,728	0	0	960
HAWAII					
FDP	KAILUA-KONA AREA COMPREHENSIVE STUDY, HAWAII, HI	1,300	0	0	200
	STATE SUB-TOTALS	1,300	0	0	200
ILLINOIS					
FDP	BIG MUDDY RIVER BASIN, IL (STRIP MINING)	3,550	0	0	500
FDP	BIG MUDDY RIVER BASIN, IL (STREAM MANAGEMENT)	740	0	0	160
FDP	CHOUTEAU ISLAND DRAINAGE AND LEVEE DISTRICT AREA, IL	530	0	0	180
FDP	CHOUKED CRE[illegible], IL	690	0	0	160

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STUDIES AVAILABLE FOR INITIATION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
N	QUINCY BAY, MISSISSIPPI RIVER, QUINCY, IL	430	0	0	120
FDP	SANGAMON RIVER, SOUTH FORK, FLAT BRANCH, IL	444	0	0	100
	STATE SUB-TOTALS	6,364	0	0	1,180
INDIANA					
FDP	INDIANAPOLIS, IN	430	0	0	150
	STATE SUB-TOTALS	430	0	0	150
IOWA					
FDP	RIVER BASINS OF IOWA (MISSOURI RIVER & TRIBS), IA	3,700	0	0	550
	STATE SUB-TOTALS	3,700	0	0	550
KENTUCKY					
FDP	METROPOLITAN REGION OF LOUISVILLE, KY	500	0	0	150
FDP	SALYERSVILLE, KY	500	0	0	150
FDP	TRADEWATER RIVER BASIN, KY	500	0	0	150
	STATE SUB-TOTALS	1,500	0	0	450
MAINE					
N	MONHEGAN HARBOR, ME	210	0	0	85
	STATE SUB-TOTALS	210	0	0	85
MARYLAND					
N	BALTIMORE HARBOR & CHNLS (ANCHORAGES), MD	190	0	0	80
	STATE SUB-TOTALS	190	0	0	80
MICHIGAN					
N	ST. JOSEPH HARBOR, MI	445	0	0	100
	STATE SUB-TOTALS	445	0	0	100
MINNESOTA					
FDP	EAST TWO RIVERS, MN	244	0	0	120
FDP	MANKATO URBAN STUDY, MN	1,175	0	0	300
	STATE SUB-TOTALS	1,419	0	0	420
MISSOURI					
FDP	BLACK RIVER, MO & AR	1,530	0	0	200
SP	MERAMEC RIVER BASIN, MO (WATER SUPPLY STUDY)	600	0	0	600
	STATE SUB-TOTALS	2,130	0	0	800
MONTANA					
FDP	MILK RIVER, HAVRE, MT	500	0	0	100
FDP	WIND POWER AT FORT PECK LAKE, MT	1,000	0	0	50
	STATE SUB-TOTALS	1,500	0	0	150
NEW JERSEY					
SP	ABSECON ISLAND, NJ (PHASE I)	850	0	0	250
FDP	ELIZABETH RIVER, HILLSIDE, AND IRVINGTON, NJ	478	0	0	180
SP	LONG BEACH ISLAND, NJ (PHASE I)	359	0	0	50
	STATE SUB-TOTALS	1,687	0	0	480
NEW YORK					
N	LAKE MONTAUK HARBOR, NY	270	0	0	110
N	STAPLETON MARINE TERMINAL, NY	290	0	0	120
	STATE SUB-TOTALS	560	0	0	230
NORTH CAROLINA					
FDP	GUILFORD COUNTY, NC	1,381	0	0	200

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STUDIES AVAILABLE FOR INITIATION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
	STATE SUB-TOTALS	1,381	0	0	206
PUERTO RICO					
N	GUAYANES, LAS MAREAS AND GUAYANILLA HARBORS, PR	395	0	0	60
	STATE SUB-TOTALS	395	0	0	60
SOUTH CAROLINA					
FDP	JOHNS ISLAND, SC	449	0	0	79
SP	SOUTH CAROLINA SHORES, SC	663	0	0	70
	STATE SUB-TOTALS	1,112	0	0	149
TEXAS					
FDP	CHAMBERS CREEK, TX	375	0	0	120
FC	ELM FORK & TRIBUTARIES, TX	590	0	0	200
FDP	LITTLE FOSSIL CREEK, TX	685	0	0	200
	STATE SUB-TOTALS	1,650	0	0	520
VIRGIN ISLANDS					
N	CHRISTIANSTED HARBOR, VI	260	0	0	50
	STATE SUB-TOTALS	260	0	0	50
WISCONSIN					
FDP	LA CRUSSE, WI (PHASE I)	539	0	0	175
	STATE SUB-TOTALS	539	0	0	175
	NATIONAL TOTALS	38,344	0	0	8,840
	NATIONAL TOTALS	38,344	0	0	8,840

CAPABILITIES FOR STUDIES UNDERWAY

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
ALABAMA					
N	ALABAMA - COOSA RIVERS BELOW CLAIBORNE L & D, AL	1,850	340	150	150
N	CHOCTAWHATCHEE RIVER BASIN, AL & FL	610	487	123	123
N	MISS RIVER NAV SYSTEM ADEQUATE MOORING FACIL FOR WATERCRAFT	1,250	525	50	50
FDP	TOMBIGBEE RIVER AND TRIBUTARIES, AL & MS	1,932	682	0	100
N	WARRIOR - TOMBIGBEE WATERWAY, AL	2,573	2,253	320	320
	STATE SUB-TOTALS	8,215	4,287	643	743
ALASKA					
N	NORTHWESTERN ALASKA HARBORS, AK	682	156	0	130
FDP	RIVERS AND HARBORS IN ALASKA, AK	7,859	1,625	550	700
FDP	SMALL HYDROPOWER, AK	3,550	2,195	775	900
FDP	SOUTHCENTRAL RAILBELT AREA, AK	5,754	5,209	0	50
N	SOUTHCENTRAL DEEP-DRAFT NAVIGATION, AK	1,401	872	185	185
	STATE SUB-TOTALS	19,246	10,057	1,510	1,965
ARIZONA					
FDP	GILA RIVER AND TRIBUTARIES, AZ & NM	3,650	2,215	560	760
	STATE SUB-TOTALS	3,650	2,215	560	760
ARKANSAS					
FDP	ARKANSAS RIVER VICINITY OF FT SMITH - VAN BUREN, AR	1,270	910	310	310
N	ARKANSAS RIVER & TRIBS HYDROPOWER & OTHER PURPOSES, AR & OK	2,590	1,831	437	437
FDP	CLARKSVILLE, AR	900	75	208	300
FDP	OUACHITA RIVER BASIN, AR & LA	8,000	4,574	1,586	1,586
COM	RED RIVER BELOW DENISON DAM (AUTH. RPTS), AR, LA, OK & TX	1,710	782	250	455
	STATE SUB-TOTALS	14,470	8,172	2,791	3,088
CALIFORNIA					
FDP	ALAMEDA CREEK, UPPER BASIN, CA	1,290	1,020	170	170
FDP	ANTELOPE VALLEY, CA	1,590	544	0	100
N	BOLINAS LAGOON, CA	985	185	0	125
FDP	CALLEGUAS CREEK, CA	1,725	915	100	100
SPE	COAST OF CALIFORNIA, STORM AND TIDAL WAVES, CA	7,000	535	500	1,500
N	COAST OF NORTHERN CALIFORNIA, CA (HBRS FOR LIGHT DRAFT VESSELS)	1,017	911	0	106
FDP	EEL RIVER, CA	1,795	451	0	215
FDP	GUADALUPE RIVER, CA	1,770	1,464	0	270
N	HUMBOLDT HARBOR AND BAY, CA	1,360	827	0	250
N	LOS ANGELES-LONG BEACH HARBORS (INCL SAN PEDRO BAY MODEL), CA	6,434	6,141	0	160
FDP	LOS ANGELES COUNTY DRAINAGE AREA REVIEW, CA	3,565	1,943	350	600
FDP	MORRISON CREEK STREAM GROUP, CA (PHASE I)	3,000	925	525	700
N	MORRO BAY HARBOR, CA	730	154	0	230
N	NORTH COAST OF LOS ANGELES COUNTY, CA	550	165	0	80
FDP	NORTHERN CALIFORNIA STREAMS, CA	8,430	6,944	300	680
N	OAKLAND INNER HARBOR, CA	495	407	88	88
N	REDONDO BEACH HARBOR (KING HARBOR), CA	175	40	0	85
FDP	SACRAMENTO RIVER & TRIBS BANK PROT & EROS CONTROL, CA	2,450	2,087	297	297
N	SAN FRANCISCO BAY AREA (IN-DEPTH), CA	3,080	2,563	140	324
FDP	SAN FRANCISCO BAY SHORELINE, CA	3,414	835	300	700
FDP	SAN JOAQUIN RIVER BASIN, CA	7,500	4,196	994	994
N	SAN LEANDRO BAY, CA	690	50	0	160
FDP	SAN LORENZO RIVER SILT REMOVAL, CA	455	250	0	160
FDP	SAN LUIS OBISPO COUNTY, CA	915	380	0	300
N	SAN PEDRO BAY PORTS, CA	1,220	1,040	180	180
FDP	SANTA ANA RIVER & ORANGE COUNTY, CA	8,170	6,022	655	815
FDP	SANTA BARBARA COUNTY STREAMS, CA	1,330	559	250	350
N	SUNSET HARBOR, CA	820	619	0	160
FDP	WALNUT CREEK BASIN, CA	674	574	0	100
	STATE SUB-TOTALS	72,629	41,846	4,889	9,999
COLORADO					
FDP	ARK R & TRIBS ABOVE JOHN MARTIN DAM, CO. (PHASE I)	4,300	2,371	350	650
	STATE SUB-TOTALS	4,300	2,371	350	650

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CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
CONNECTICUT					
N	BRIDGEPORT HARBOR, CT....................	642	602	40	40
COM	CONNECTICUT RIVER BASIN, AUTH REPORTS, . CT, MA, & NH............................	4,955	2,408	273	669
FDP	HOUSATONIC RIVER BASIN, CT & MA..........	689	689	0	150
SPE	LONG ISLAND SOUND - DREDGED MATERIAL ... CONTAINMENT STUDY, CT..................	1,806	1,208	290	490
COM	LONG ISLAND SOUND - AUTH REPORTS, CT....	1,077	85	0	150
	STATE SUB-TOTALS	9,169	4,988	603	1,499
DIST OF COLUMBIA					
SPE	METROPOLITAN WASHINGTON WATER SUPPLY, .. DC......................................	4,145	3,843	302	302
	STATE SUB-TOTALS	4,145	3,843	302	302
FLORIDA					
N	BISCAYNE BAY, FL.........................	2,306	100	0	230
FDP	CENTRAL AND SOUTHERN FLORIDA WATER ...... SUPPLY, FL.............................	2,174	1,317	500	500
N	CHARLOTTE HARBOR (PORT BOCA GRANDE), FL.	418	6	45	45
FDP	GOLDEN GATE ESTATES, FL..................	1,244	522	0	240
N	GULF COAST PASSES, FL....................	465	245	220	220
FDP	KISSIMMEE RIVER, FL......................	2,468	2,030	253	372
N	MEXICO BEACH INLET, FL...................	202	72	0	110
N	MIAMI HARBOR CHANNEL, FL.................	330	75	150	150
N	PALM BEACH HARBOR, FL....................	170	35	90	90
FDP	SIX MILE CYPRESS SLOUGH, FL..............	387	59	0	150
FDP	SUWANEE RIVER, FL........................	1,572	50	530	530
	STATE SUB-TOTALS	11,736	4,511	1,788	2,637
GEORGIA					
FDP	BRUNSWICK, GA............................	1,346	200	200	450
FDP	DALTON LAKE, GA (PHASE I)................	4,706	190	500	500
FDP	METROPOLITAN SAVANNAH, GA................	1,957	1,707	250	250
FDP	NORTHEAST GEORGIA REGION, GA.............	1,300	100	250	450
N	SAVANNAH HARBOR COMPREHENSIVE, GA........	1,609	1,185	356	356
	STATE SUB-TOTALS	10,918	3,382	1,556	2,006
GUAM					
N	HARBORS & RIVERS IN THE TERRITORY OF ... GUAM, GU................................	3,200	2,341	525	525
	STATE SUB-TOTALS	3,200	2,341	525	525
HAWAII					
FDP	HARBORS & RIVERS IN HAWAII, HI...........	3,600	2,457	510	660
N	HILO AREA COMPREHENSIVE STUDY, HI........	1,300	1,157	143	143
	STATE SUB-TOTALS	4,900	3,614	653	803
IDAHO					
FDP	COLUMBIA RIVER AND TRIBUTARIES, ID, OR,. WA, & MT................................	20,175	11,792	1,300	1,660
FDP	PALOUSE RIVER & TRIBUTARIES, ID & WA...	635	197	0	50
FDP	UPPER SNAKE RIVER AND TRIBUTARIES, ID &. WY......................................	7,085	3,376	680	1,450
	STATE SUB-TOTALS	27,895	15,365	1,980	3,160
ILLINOIS					
FDP	ALEXANDER AND PULASKI COUNTIES, IL.......	720	98	263	263
FDP	CHICAGO - SOUTH END OF LAKE MICHIGAN, .. IL & IN.................................	5,396	3,257	100	280
FDP	CHICAGOLAND UNDERFLOW PLAN, IL (PHASE .. I) (CUP)................................	8,912	6,359	1,300	1,300
SPE	DIVERSION OF LAKE MICHIGAN WATER AT .... CHICAGO, IL..............................	1,961	1,731	0	210
FDP	FOX RIVER & TRIBUTARIES, IL & WI.........	2,196	1,728	433	433
N	ILLINOIS SOLM FROM WAUKEGAN NORTH TO ... IL-WI STATE LINE, IL....................	488	185	0	170
FDP	MACKINAW RIVER BASIN, IL.................	830	55	0	15[illegible]
FDP	MISS RIV, COON RAPIDS DAM TO OHIO RIVER, IL, IA, MN, MO & WI.....................	8,795	3,195	1,920	2,220
FDP	MISSISSIPPI RIVER ABOVE MISSOURI RIVER,. IL & MO.................................	970	56	0	87
FDP	OHIO RIVER MAIN STEM STUDY, IL, IN, KY,. OH, PA, & WV............................	7,500	1,660	1,185	1,900
FDP	RICHLAND CREEK, IL.......................	1,010	689	260	260
	STATE SUB-TOTALS	38,728	19,017	5,461	7,233

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CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
INDIANA					
FDP	LITTLE CALUMET RIVER (CADY MARSH DITCH), IN....................................	120	45	0	75
FDP	PIGEON CREEK, IN........................	567	67	0	150
COM	WABASH RIVER BASIN COMP. (AUTHORIZATION, REPORTS), IN & IL....................	3,050	1,364	208	500
FDP	WHITEWATER RIVER AND TRIBS, IN & OH.....	612	112	0	150
	STATE SUB-TOTALS	4,349	1,588	208	875
KANSAS					
FDP	AR RIVER & TRIBS, GREAT BEND, KS TO .... TULSA, OK..................................	7,000	3,827	600	600
FDP	ARKANSAS RIV FROM GREAT BEND, KS TO .... JOHN MARTIN DAM, CO......................	3,390	2,323	320	320
FDP	GRAND NEOSHO RIVER, KS & OK.............	2,510	575	0	400
FDP	KANSAS AND OSAGE RIVERS, KS.............	5,240	4,200	550	750
FDP	VERDIGRIS RIVER, KS & OK................	3,210	2,679	371	371
	STATE SUB-TOTALS	21,350	13,604	1,841	2,441
KENTUCKY					
N	BIG SANDY RIVER, KY, WV, & VA...........	3,600	2,112	230	500
N	GREEN AND BARREN RIVERS, KY & IN........	1,300	758	150	300
FDP	KENTUCKY RIVER AND TRIBUTARIES, KY......	1,800	972	500	500
SPE	KENTUCKY RIVER NATIONAL RECREATION AREA, KY.....................................	506	6	0	150
N	LOWER CUMBERLAND - TENNESSEE RIVERS .... BELOW BARKLEY CANAL, KY.................	1,445	895	250	300
FDP	UPPER CUMBERLAND RIVER BASIN, KY........	3,069	1,069	300	400
	STATE SUB-TOTALS	11,720	5,812	1,430	2,150
LOUISIANA					
FDP	ALOHA-RIGOLETTE AREA, LA................	690	505	0	150
N	GULF INTRACOASTAL WATERWAY, LA - TX .... SECTION, LA & TX.........................	3,760	1,901	499	499
FDP	LOUISIANA COASTAL AREA, LA..............	4,530	1,685	0	400
FDP	MERMENTAU, VERMILION, & CALCASIEU RVS &. BAYOU TECHE, LA..........................	5,420	877	550	800
	STATE SUB-TOTALS	14,400	4,968	1,049	1,849
MAINE					
N	FORE RIVER CHANNEL PORTLAND HARBOR, ME..	420	252	0	110
SPE	PASSAMAQUODDY TIDAL POWER STUDY, ME.....	5,421	1,674	0	700
N	PORTLAND HARBOR, ME.....................	373	145	0	40
FDP	SAINT JOHN RIVER, ME....................	3,522	1,098	380	480
	STATE SUB-TOTALS	9,736	3,169	380	1,330
MARYLAND					
SPE	CHESAPEAKE BAY STUDY, MD & VA...........	36,388	29,771	1,500	3,490
	STATE SUB-TOTALS	36,388	29,771	1,500	3,490
MASSACHUSETTS					
N	BOSTON HARBOR, MA.......................	420	355	0	40
N	EAST BOAT BASIN, SANDWICH, MA...........	375	250	100	100
COM	SOUTHEASTERN NEW ENGLAND AUTH REPORTS, . MA, RI, & CT.............................	2,036	1,106	240	520
	STATE SUB-TOTALS	2,831	1,711	340	660
MICHIGAN					
N	GREAT LAKES CONNECT C & H, MI, IL, IN, . MN, NY, OH, PA & WI......................	4,930	3,549	925	[illegible]
FDP	GREAT LAKES, PARTICULARLY LAKE ONTARIO . & LAKE ERIE, MI..........................	9,751	8,356	219	[illegible]
FDP	SAGINAW RIVER, MI.......................	3,175	400	142	490
	STATE SUB-TOTALS	17,856	12,305	1,286	1,869
MINNESOTA					
FDP	MINNESOTA RIVER VALLEY, MN..............	9,080	2,898	195	840
FDP	RED RIVER OF THE NORTH, MN & ND.........	7,300	5,137	93	985
FDP	ST. CROIX RIVER, MN & WI................	950	152	60	160
	STATE SUB-TOTALS	17,330	8,187	1,348	1,985

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CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
MISSISSIPPI					
N	MISSISSIPPI SOUND AND ADJACENT AREAS, MS & AL	2,067	1,671	340	340
N	PASCAGOULA HARBOR, MS	1,160	648	300	300
FDP	PEARL RIVER BASIN, MS & LA	4,050	3,189	400	400
FDP	SOWASHEE CREEK, MS (PHASE I)	667	629	38	38
SPE	TENNESSEE TOMBIGBEE WATERWAY, MS, AL, TN, & KY	5,846	4,330	962	962
N	WOLF AND JORDAN RIVERS, MS	175	50	90	90
	STATE SUB-TOTALS	13,965	10,517	2,130	2,130
MISSOURI					
FDP	ST LOUIS METROPOLITAN AREA, MO & IL	11,530	6,303	1,210	2,060
FDP	STE GENEVIEVE, MO	820	503	177	177
FDP	WHITE RIVER BASIN COUNTY LINE LAKE, MO	950	465	200	300
	STATE SUB-TOTALS	13,300	7,311	1,587	2,537
NEVADA					
FDP	TRUCKEE MEADOWS, NV	1,550	1,370	180	180
	STATE SUB-TOTALS	1,550	1,370	180	180
NEW HAMPSHIRE					
FDP	WINNIPESAUKEE RIVER, NH	683	413	200	225
	STATE SUB-TOTALS	683	413	200	225
NEW JERSEY					
FDP	HACKENSACK RIVER BASIN, [illegible] & NY	4,095	1,199	0	665
N	NEW YORK HARBOR AND ADJACENT CHANNELS, NJ & NY	4,320	450	1,750	2,000
FDP	PASSAIC RIVER BASIN STUDY, NJ & NY (PHASE I)	14,000	10,351	1,790	2,090
FDP	RARITAN RIVER BASIN, NJ	4,163	2,979	300	300
	STATE SUB-TOTALS	26,528	14,979	3,840	5,055
NEW MEXICO					
FDP	RIO GRANDE AND TRIBUTARIES, NM & CO	7,700	4,408	620	750
FDP	RIO GRANDE & TRIBS (RIO PUERCO & RIO SALADO), NM (PHASE I)	1,930	1,870	60	60
	STATE SUB-TOTALS	9,630	6,278	680	810
NEW YORK					
N	ARTHUR KILL CHANNEL, HOWLAND HOOK MARINE TERMINAL, NY	667	282	187	250
N	BUFFALO HARBOR, NY	2,000	1,005	500	500
FDP	CATTARAUGUS CREEK, NY	329	59	0	100
COM	GENESEE RIVER BASIN, NY & PA (AUTHORIZATION REPORT)	725	185	0	100
N	GREAT LAKES - HUDSON RIVER WATERWAY, NY.	6,270	873	0	150
N	JONES INLET AND FREEPORT LONG ISLAND, NY	584	341	200	200
SP	LAKE ONTARIO - ST. LAWRENCE RIVER, NY	3,500	1,000	0	600
FDP	OSWEGO RIVER WATERSHED, NY	3,454	2,929	450	450
N	ST. LAWRENCE SEAWAY, ADDITIONAL LOCKS, NY	3,025	2,349	500	500
	STATE SUB-TOTALS	20,554	9,023	1,837	2,850
NORTH CAROLINA					
N	CAPE FEAR RIVER ACME TO FAYETTEVILLE, NC	790	180	300	350
FDP	LUMBER RIVER BASIN, NC & SC	770	666	104	104
FDP	NEUSE RIVER, NC	1,962	662	250	250
SP	WEST ONSLOW BEACH AND NEW RIVER INLET, NC	763	295	125	125
	STATE SUB-TOTALS	4,285	1,803	779	829
NORTH DAKOTA					
FDP	PEMBINA RIVER, ND (PHASE I)	1,480	1,249	231	231
	STATE SUB-TOTALS	1,480	1,249	231	231

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CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
OHIO					
FDP	BEAVER RIVER BASIN, OH & PA..............	1,575	930	100	250
FDP	CENTRAL OHIO SURVEY, OH..................	3,400	2,245	200	300
N	CLEVELAND HARBOR, OH (PHASE I)...........	1,399	1,035	275	275
FDP	CUYAHOGA RIVER RESTORATION STUDY, OH....	1,368	965	70	170
N	LAKE ERIE COAST, OH, MI, PA & NY........	3,016	674	0	150
N	LORAIN HARBOR, OH........................	1,513	1,188	325	325
FDP	MIAMI RIVER, LITTLE MIAMI RIVER, AND ... MILL CREEK BASIN, OH.....................	3,880	3,099	400	400
FDP	MUSKINGUM RIVER, OH......................	1,775	1,349	100	100
FDP	WESTERN LAKE ERIE SHORE, OH..............	1,190	720	0	190
	STATE SUB-TOTALS	19,116	12,205	1,470	2,160
OKLAHOMA					
FDP	CANADIAN RIVER & TRIBUTARIES, OK, TX, &. NM......................................	3,200	1,477	175	285
N	CENTRAL OKLAHOMA PROJECT, OK.............	2,440	1,670	150	150
FDP	POTEAU RIVER, OK & AR....................	1,500	1,036	370	370
	STATE SUB-TOTALS	7,140	4,183	695	805
OREGON					
N	COLUMBIA RIVER COAL EXPORT CHANNEL, OR . & WA......................................	2,000	450	500	665
N	COLUMBIA RIVER AT THE MOUTH, OR & WA....	564	509	55	55
N	COQUILLE RIVER AND BAR, OR...............	524	250	140	140
FDP	KLAMATH RIVER BASIN, OR..................	3,025	438	0	430
FDP	POWDER RIVER & TRIBUTARIES, OR...........	304	0	0	90
N	ROGUE RIVER AT GOLD BEACH, OR............	805	687	0	90
COM	WILLAMETTE RIVER BASIN, OR...............	3,030	1,066	250	400
	STATE SUB-TOTALS	10,252	3,400	945	2,370
PENNSYLVANIA					
FDP	ALLEGHENY RIVER BASIN, PA................	2,250	100	100	350
N	DELAWARE RIVER COMPREHENSIVE NAVIGATION. STUDY, PA, NJ & DE......................	5,000	120	600	750
N	DELAWARE RIVER DREDGE DISPOSAL STUDY, .. PA, NJ, & DE.............................	1,355	990	100	280
N	DELAWARE RIVER AND TRIBUTARIES DRIFT ... REMOVAL, PA, NJ, & DE....................	203	7	0	50
FDP	DELAWARE RIVER BASIN STUDY, PA, NJ, NY,. & DE.....................................	1,450	1,265	185	185
FDP	KISKIMINETAS RIVER BASIN, PA.............	2,400	685	525	525
FDP	LEHIGH RIVER BASIN (HYDROPOWER) STUDY, . PA.......................................	1,796	655	290	290
FDP	MONONGAHELA-YOUGHIOGHENY RIVER BASIN, .. PA, WV & MD..............................	6,500	3,292	750	900
FDP	WEST BRANCH SUSQUEHANNA RIVER, ... WILLIAMSPORT & S. WILLIAMSPORT, PA......	1,300	975	225	225
	STATE SUB-TOTALS	21,854	8,089	2,575	3,555
PUERTO RICO					
FDP	LA PLATA RIVER AND TRIBUTARIES, PR......	910	328	280	280
	STATE SUB-TOTALS	910	328	280	280
SOUTH CAROLINA					
FDP	GILLS CREEK, SC..........................	1,382	442	455	455
FDP	LITTLE PEE DEE & PEE DEE RIVERS, SC & .. NC.......................................	813	35	100	160
FDP	LYNCHES RIVER, SC & NC...................	727	68	0	85
SP	MYRTLE BEACH, SC.........................	400	50	200	200
	STATE SUB-TOTALS	3,322	595	755	900
SOUTH DAKOTA					
FDP	EASTERN SOUTH DAKOTA AND UPPER BIG ..... SIOUX RIVER, SD & IA.....................	2,700	1,665	475	475
FDP	MISSOURI RIVER, SD, NE, ND, & MT........	6,550	4,022	800	900
FDP	WESTERN DAKOTAS REGION OF SD............	2,035	914	380	500
	STATE SUB-TOTALS	11,285	6,601	1,655	1,875
TENNESSEE					
FDP	METROPOLITAN REGION OF NASHVILLE, TN....	2,974	2,354	220	220
	STATE SUB-TOTALS	2,974	2,354	220	220

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CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
TEXAS					
FDP	BRAZOS NATURAL SALT POLLUTION CONTROL, TX (PHASE I)	1,800	1,583	217	217
FDP	BRAZOS RIVER AND TRIBUTARIES, TX	8,350	5,671	400	525
FDP	BUFFALO BAYOU AND TRIBUTARIES, TX	6,270	2,937	900	1,000
FDP	COLORADO RIVER AND TRIBUTARIES, TX	4,300	3,608	300	300
FDP	DICKINSON BAYOU, TX	964	50	100	300
N	GALVESTON BAY AREA, TX	3,720	3,082	500	500
FDP	GUADALUPE AND SAN ANTONIO RIVERS, TX	4,360	509	100	100
FDP	JOHNSON CREEK, TX	564	443	0	120
FDP	LITTLE CYPRESS CREEK, TX & LA	1,630	650	240	515
FDP	PINE ISLAND BAYOU WATERSHED, TX	957	300	200	300
SP	PLEASURE ISLAND AT PORT ARTHUR, TX	800	65	0	300
FDP	RED RIVER & TRIBUTARIES ABOVE DENISON DAM, TX, OK, & NM	3,900	878	100	350
FDP	SAN JACINTO RIVER & TRIBS, TX	3,120	1,577	350	400
	STATE SUB-TOTALS	40,735	21,353	3,407	4,927
UTAH					
FDP	COLORADO RIVER & TRIBS, ABOVE LEE FERRY, UT, AZ, CO, NM & WY	3,000	1,159	310	610
FDP	JORDAN RIVER BASIN, UT	1,900	1,300	300	300
	STATE SUB-TOTALS	4,900	2,459	610	910
VIRGINIA					
FDP	CHOWAN RIVER, VA & NC	2,255	1,570	412	412
FDP	ROANOKE RIVER UPPER BASIN, VA	1,671	1,499	172	172
FDP	VIRGINIA BEACH, VA (PHASE I)	1,360	952	408	408
N	YORK AND PAMUNKEY RIVERS, VA	630	273	150	150
	STATE SUB-TOTALS	5,916	4,294	1,142	1,142
VIRGIN ISLANDS					
FDP	PUERTO RICO - VIRGIN ISLANDS PIPELINE STUDY, VI & PR	1,770	1,623	147	147
	STATE SUB-TOTALS	1,770	1,623	147	147
WASHINGTON					
FDP	CHEHALIS RIVER AND TRIBUTARIES, WA	2,527	2,085	200	200
FDP	MILL CREEK BASIN, WA	829	129	50	100
COM	PUGET SOUND AND ADJACENT WATERS, WA	7,300	5,045	470	660
N	SEATTLE HARBOR - DUWAMISH WATERWAY, WA	2,712	2,662	50	50
N	SNOHOMISH RIVER (NAVIGATION), WA	750	366	200	250
FDP	YAKIMA VALLEY, WA (REGIONAL WATER MANAGEMENT)	1,840	478	0	100
	STATE SUB-TOTALS	15,958	10,765	970	1,360
WEST VIRGINIA					
FDP	GUYANDOTTE RIVER BASIN, VICINITY OF LOGAN AND MULLENS, WV	1,509	1,139	220	220
COM	KANAWHA BASIN COMPREHENSIVE STUDY, WV	3,194	2,789	300	300
N	KANAWHA RIVER NAVIGATION, WV (WINFIELD L&D REPLACEMENT)	3,200	600	1,000	1,200
	STATE SUB-TOTALS	7,903	4,528	1,520	1,720
WISCONSIN					
FDP	ROCK RIVER ABOVE ROCKTON, WI & IL	823	207	0	125
FDP	WISCONSIN RIVER AT PORTAGE, WI	842	692	100	100
	STATE SUB-TOTALS	1,665	899	100	225
	NATIONAL TOTALS	616,836	343,743	60,908	89,462
	NATIONAL TOTALS	616,836	343,743	60,908	89,462

CAPABILITIES FOR CONTINUATION OF PLANNING AND ENGINEERING

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1985 APPROVED BUDGET	FY 1986 CAPABILITY
ALABAMA					
N	MOBILE HARBOR, AL	3,285	700	1,000	1,000
FC	VILLAGE CREEK, AL	415	0	0	215
	STATE SUB-TOTALS	3,700	700	1,000	1,215
ARIZONA					
FC	HOLBROOK, LITTLE COLORADO RIVER, AZ	680	125	200	200
	STATE SUB-TOTALS	680	125	200	200
ARKANSAS					
HP	ARK RIV & TRIBS (MURRAY L&D 7), AR	1,400	0	0	600
FC	FOURCHE BAYOU IN THE VICINITY OF LITTLE, ROCK, AR	2,050	0	0	400
N	WHITE RIVER NAVIGATION - MOUTH TO BATESVILLE, AR	850	0	0	300
	STATE SUB-TOTALS	4,300	0	0	1,300
CALIFORNIA					
FC	CACHE CREEK, CA	1,400	0	0	400
N	FISHERMAN'S WHARF AREA, SAN FRANCISCO HARBOR, CA	600	75	100	475
N	OAKLAND OUTER HARBOR (DEEPENING), CA	220	125	95	95
FC	REDBANK AND FANCHER CREEKS, CA	4,300	300	410	1,300
N	SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, CA	3,500	250	600	1,100
FC	SANTA ANA RIVER, CA (PHASE I)	18,600	500	3,400	4,200
	STATE SUB-TOTALS	28,620	1,250	4,605	7,570
COLORADO					
FC	ARK R & TRIBS ABOVE JOHN MARTIN DAM (FOUNTAIN), CO	1,400	0	0	250
FC	WESTERLY CREEK, CO	6,360	0	0	200
	STATE SUB-TOTALS	7,760	0	0	450
CONNECTICUT					
N	NEW HAVEN HARBOR, CT	500	0	0	450
FC	WESTCHESTER COUNTY STREAMS, BYRAM RIVER, CT	600	0	0	100
	STATE SUB-TOTALS	1,100	0	0	550
FLORIDA					
SP	DADE COUNTY (NORTH OF HAULOVER PARK), FL	310	50	260	260
SP	INDIAN RIVER COUNTY, FL	220	0	0	130
N	JACKSONVILLE HARBOR (MILL COVE), FL	200	0	0	100
N	MANATEE HARBOR, FL	305	65	240	240
SP	PANAMA CITY BEACHES, FL	2,500	0	0	1,000
SP	ST. JOHN'S COUNTY, FL	250	0	0	150
	STATE SUB-TOTALS	3,785	115	500	1,880
GEORGIA					
FC	LAKE LANIER REREGULATION DAM, GA	1,480	0	0	450
FC	OATES CREEK, SAVANNAH RIVER BASIN, GA	815	0	0	275
N	SAVANNAH HARBOR WIDENING, GA	750	200	200	250
	STATE SUB-TOTALS	3,045	200	200	975
GUAM					
FC	AGANA RIVER, GUAM	390	0	0	180
	STATE SUB-TOTALS	390	0	0	180
HAWAII					
FC	LAVA FLOW CONTROL, HI	240	0	0	120

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CAPABILITIES FOR CONTINUATION OF PLANNING AND ENGINEERING
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
	STATE SUB-TOTALS	240	0	0	120
IDAHO					
FC	LITTLEWOOD RIVER, GOODING - SHOSHONE, ID	565	0	0	200
	STATE SUB-TOTALS	565	0	0	200
ILLINOIS					
FC	LOVE'S PARK LFP, IL	1,100	0	0	150
FC	WALLKILL RIVER, (BLACK DIRT AREA), NJ & NY (PHASE I)	400	0	0	100
	STATE SUB-TOTALS	1,500	0	0	250
IOWA					
FC	GREEN BAY L&DD, IA	450	0	0	100
FC	MUSCATINE ISLAND D&LD, IA	740	0	0	125
FC	PERRY CREEK, IA	350	0	0	300
	STATE SUB-TOTALS	1,540	0	0	525
KANSAS					
FC	ARKANSAS RIVER, GREAT BEND, KS TO TULSA, OK AT HALSTEAD, KS	694	150	290	400
FC	ONAGA LAKE, KS	2,300	0	0	130
FC	VERDIGRIS RIVER, MINGO CREEK, KS & OK	1,100	0	0	500
	STATE SUB-TOTALS	4,094	150	290	1,030
LOUISIANA					
N	MISSISSIPPI RIVER GULF OUTLET (ENLARGEMENT), LA	11,900	835	3,000	5,200
	STATE SUB-TOTALS	11,900	835	3,000	5,200
MARYLAND					
BE	ATLANTIC COAST OF MARYLAND, MD	1,800	0	0	1,050
	STATE SUB-TOTALS	1,800	0	0	1,050
MASSACHUSETTS					
FC	TOWN BROOK, QUINCY, MA	560	0	0	380
	STATE SUB-TOTALS	560	0	0	380
MICHIGAN					
N	GRAND HAVEN HARBOR, MI	520	0	0	325
N	MONROE HARBOR, MI	1,700	5	0	425
	STATE SUB-TOTALS	2,220	5	0	750
MINNESOTA					
FC	REDWOOD RIVER AT MARSHALL, MN	260	0	0	150
	STATE SUB-TOTALS	260	0	0	150
MISSOURI					
FC	BRUSH CREEK, KANSAS CITY, MO	900	0	0	250
	STATE SUB-TOTALS	900	0	0	250
NEW JERSEY					
N	BARNEGAT INLET, NJ (PHASE I)	290	0	0	100
FC	CAPE MAY INLET - LOWER TOWNSHIP, NJ (PHASE I)	202	62	0	106
N	KILL VAN KULL CHANNEL, NEWARK BAY CHANNELS, NJ & NY	2,545	0	0	1,400

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CAPABILITIES FOR CONTINUATION OF PLANNING AND ENGINEERING
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
FC	RAHWAY RIV BAS, UPPER ROBINSONS BR, CLARK & SCOTCH PLAINS, NJ	510	0	0	100
FC	RAHWAY RIVER BASIN, ROBINSON'S BRANCH AT RAHWAY, NJ	650	100	200	200
FC	RAHWAY RIVER BASIN AT SPRINGFIELD, NJ	980	100	435	435
FC	RARITAN RIVER BASIN, GREEN BROOK, NJ	5,755	0	0	500
	STATE SUB-TOTALS	10,932	262	635	2,841
NEW MEXICO					
FC	PUERCO RIVER & TRIBUTARIES, GALLUP, NM	430	0	0	175
FC	RIO GRANDE & TRIBS (MIDDLE RIO GRANDE TO BELEN), NM	2,300	0	0	500
	STATE SUB-TOTALS	2,730	0	0	675
NEW YORK					
FC	CAZENOVIA CREEK, NY	780	0	0	100
SP	HUDSON RIVER WATER SUPPLY, NY	14,000	0	0	500
N	OLCOTT HARBOR, NY	575	250	0	100
FC	WESTCHESTER CO STREAMS, MAMARONECK & SHELDRAKE RIVERS, NY	3,800	100	455	455
	STATE SUB-TOTALS	19,155	350	455	1,155
NORTH CAROLINA					
N	WILMINGTON HARBOR (NE CAPE FEAR RIVER), NC	325	180	0	226
	STATE SUB-TOTALS	325	180	0	226
OHIO					
FC	CENTRAL OHIO SURVEY AT LOGAN, OH	690	175	200	200
FC	CENTRAL OHIO SURVEY AT NORTH CHILLICOTHE, OH	800	0	0	200
FC	CENTRAL OHIO SURVEY AT NELSONVILLE, OH	690	175	0	200
N	GALLIPOLIS LOCKS AND DAM, OH & WV	2,808	1,408	1,400	1,400
FC	MIAMI RIVER BASIN OF PLEASANT RUN, VICINITY OF FAIRFIELD, OH	300	0	0	150
FC	MIAMI RIVER BASIN AT WEST CARROLLTON, OH.	300	0	0	125
FC	MUSKINGUM RIVER BASIN AT KILLBUCK, OH	800	175	150	150
FC	MUSKINGUM RIVER BASIN AT MANSFIELD, OH	630	175	250	250
	STATE SUB-TOTALS	7,018	2,108	2,000	2,675
OKLAHOMA					
MP	ARK RIV & TRIBS (R.D. MAYO L&D 14), OK	1,650	0	0	500
FC	PARKER LAKE, OK	1,900	0	0	100
	STATE SUB-TOTALS	3,550	0	0	600
OREGON					
N	BONNEVILLE NAVIGATION LOCK, OR & WA	7,400	2,825	1,622	3,500
MP	MCNARY LOCK AND DAM (SECOND POWERHOUSE), PHASE I, OR & WA	3,500	1,500	1,800	2,000
	STATE SUB-TOTALS	10,900	4,325	3,422	5,500
PENNSYLVANIA					
FC	LOCK HAVEN, PA (PHASE I)	1,700	0	0	1,050
SP	PRESQUE ISLE PENINSULA, PA	550	950	0	500
FC	SAW MILL RUN, PITTSBURG, PA	400	0	0	150
FC	SUSQUEHANNA BASIN AT HARRISBURG, PA	2,900	550	443	560
FC	WYOMING VALLEY, PA (PHASE I)	5,700	0	0	1,800
	STATE SUB-TOTALS	11,250	1,500	443	4,060
PUERTO RICO					
N	SAN JUAN HARBOR, PR (PHASE I)	500	0	0	500
	STATE SUB-TOTALS	500	0	0	500
RHODE ISLAND					
FC	BIG RIVER, RI	1,500	0	0	635
	STATE SUB-TOTALS	1,500	0	0	635

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CAPABILITIES FOR CONTINUATION OF PLANNING AND ENGINEERING
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1985 CAPABILITY
SOUTH CAROLINA					
N	CHARLESTON HARBOR, SC (PHASE I)..........	1,100	0	0	863
	STATE SUB-TOTALS	1,100	0	0	863
TEXAS					
N	BRAZOS ISLAND HARBOR (42 FOOT PROJECT), TX.......	673	0	0	200
FC	COLORADO RIVER AND TRIBS, BOGGY CREEK, TX.......	1,035	270	350	395
FC	LAKE WICHITA, HOLLIDAY CREEK AT WICHITA FALLS, TX.......	1,025	80	190	250
FC	UPPER WHITE OAK BAYOU AND TRIBUTARIES, VICINITY OF HOUSTON, TX.......	3,040	330	570	700
	STATE SUB-TOTALS	5,773	680	1,110	1,545
VIRGINIA					
N	NORFOLK HARBOR & CHANNELS DEEPENING, VA.	15,900	2,600	3,300	4,000
FC	RICHMOND, VA (PHASE I).................	4,000	0	0	1,400
	STATE SUB-TOTALS	19,900	2,600	3,300	5,400
VIRGIN ISLANDS					
N	VIRGIN ISLANDS (CROWN BAY), VI..........	160	0	0	50
	STATE SUB-TOTALS	160	0	0	50
WASHINGTON					
N	BLAIR AND SITCUM WATERWAYS, TACOMA HARBOR, WA.......	960	500	0	460
FC	CHEHALIS RIVER AT SOUTH ABERDEEN - COSMOPOLIS, WA.......	1,000	0	0	400
FC	YAKIMA RIVER AT UNION GAP, WA...........	510	0	0	230
	STATE SUB-TOTALS	2,470	500	0	1,090
	NATIONAL TOTALS	176,222	15,885	21,160	52,040
	NATIONAL TOTALS	176,222	15,885	21,160	52,040

PROJECTS AVAILABLE FOR INITIATION OF A.E. & D.

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ARKANSAS					
HP	WHITE RIVER FISH HATCHERY, WHITE RIVER BASIN, AR	6,000	0	0	100
	STATE SUB-TOTALS	6,000	0	0	100
FLORIDA					
N	TAMPA HARBOR BRANCH CHANNELS, FL	44,000	0	0	200
	STATE SUB-TOTALS	44,000	0	0	200
ILLINOIS					
FC	BIG SWAN DRAINAGE & LEVEE DISTRICT, IL	11,900	0	0	90
FC	FORT CHARTRES & IVY LANDING DD #5, & STRINGTOWN D&LD #4, IL	7,030	0	0	90
FC	RUSSELL AND ALLISON LEVEE, IL	16,600	0	0	160
FC	SCOTT COUNTY DRAINAGE & LEVEE DISTRICT, IL	13,800	0	0	90
	STATE SUB-TOTALS	49,330	0	0	430
KANSAS					
FC	DOUGLASS LAKE, KS	71,900	0	0	100
FC	MELVERN-POMONA LAKES AREA, KS (ROAD IMPROVEMENT)	500	0	0	25
FC	TUTTLE CREEK LAKE ROAD & BRIDGE, KS	630	0	0	35
	STATE SUB-TOTALS	73,030	0	0	160
KENTUCKY					
FC	CELINA LAKE, KY & TN	221,450	0	0	500
	STATE SUB-TOTALS	221,450	0	0	500
MARYLAND					
N	OCEAN CITY HBR & INLET & SINEPUXENT BAY, MD	960	0	0	130
	STATE SUB-TOTALS	960	0	0	130
MASSACHUSETTS					
BE	NANTASKET BEACH, MA	2,425	0	0	50
	STATE SUB-TOTALS	2,425	0	0	50
MICHIGAN					
N	MIDDLE CHANNEL, ST. CLAIR RIVER, MI	720	0	0	70
	STATE SUB-TOTALS	720	0	0	70
MISSOURI					
FC	LOWER GRAND RIVER, MO	33,600	0	0	150
FC	MERAMEC RIVER BASIN, MO	20,000	0	0	400
	STATE SUB-TOTALS	53,600	0	0	550
NEW JERSEY					
N	DELAWARE RIVER, PHILADELPHIA TO TRENTON, (TIOGA TERMINAL), NJ	1,790	0	0	100
	STATE SUB-TOTALS	1,790	0	0	100
NEW YORK					
N	PORT BAY, NY	5,820	0	0	100
	STATE SUB-TOTALS	5,820	0	0	100

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PROJECTS AVAILABLE FOR INITIATION OF A E & D
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
PENNSYLVANIA					
N	DELAWARE RIV, PHILA TO THE SEA, PA, NJ, & DE (MANTUA CREEK ANCHOR)	41,900	0	0	150
FC	PROMPTON LAKE, PA (MODIFICATION)	35,000	0	0	600
	STATE SUB-TOTALS	76,900	0	0	750
PUERTO RICO					
BE	SAN JUAN BEACH, PR (REIMB)	900	0	0	50
	STATE SUB-TOTALS	900	0	0	50
SOUTH DAKOTA					
MP	SPRINGFIELD WATER INTAKE, SD	2,190	0	0	285
	STATE SUB-TOTALS	2,190	0	0	285
	NATIONAL TOTALS	539,115	0	0	3,475
	NATIONAL TOTALS	539,115	0	0	3,475

CAPABILITIES FOR A.E. & D. PROJECTS UNDERWAY

[Amounts in thousands]

ARKANSAS					
FC	MCKINNEY BAYOU, AR & TX	6,900	810	240	240
FC	PINE MOUNTAIN LAKE, AR	63,600	1,432	218	218
	STATE SUB-TOTALS	70,500	2,242	458	458
CALIFORNIA					
FC	COTTONWOOD CREEK, CA	458,000	8,525	3,200	4,600
FC	GOLETA AND VICINITY, CA	41,600	890	0	350
N	NOYO RIVER AND HARBOR (CHANNEL EXTENSION), CA	1,700	315	64	100
N	NOYO RIVER AND HARBOR (BREAKWATER), CA	5,790	554	35	130
FC	PAJARO RIVER, CA	1,480	260	90	190
FC	SAN LUIS REY RIVER, CA	26,200	1,614	200	200
	STATE SUB-TOTALS	534,770	12,158	3,589	5,570
DELAWARE					
FC	DELAWARE COAST PROTECTION, DE	38,000	1,429	50	100
	STATE SUB-TOTALS	38,000	1,429	50	100
ILLINOIS					
FC	HARTWELL DRAINAGE AND LEVEE DISTRICT, IL	10,700	832	208	208
FC	HILLVIEW DRAINAGE AND LEVEE DISTRICT, IL	10,700	785	220	220
FC	MEREDOSIA LAKE AND WILLOW CREEK D & L DISTRICT, IL	8,600	445	220	220
FC	MEREDOSIA, IL & MEREDOSIA, WILLOW CREEK, & COON RUN D&L DIST, IL	10,100	550	222	222
FC	MOLINE, IL	20,500	1,069	281	281
FC	ROCK RIVER AGRICULTURAL LEVEES, IL	30,100	630	68	240
	STATE SUB-TOTALS	90,700	4,311	1,219	1,391
KENTUCKY					
FC	FRANKFORT, KY (SOUTH FRANKFORT)	4,730	170	92	380
	STATE SUB-TOTALS	4,730	170	92	380
LOUISIANA					
FC	RED RIVER WATERWAY, SHREVEPORT, LA TO VICINITY OF INDEX, AR	186,000	938	0	495
FC	WEST AGURS LEVEE, LA	800	257	63	63
	STATE SUB-TOTALS	186,800	1,195	63	558

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CAPABILITIES FOR A E & D PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
MICHIGAN					
N	CROSS VILLAGE HARBOR, MI	3,400	364	0	86
FC	RED RUN DRAIN AND LOWER CLINTON RIVER, MI	125,000	3,771	85	375
	STATE SUB-TOTALS	128,400	4,135	85	461
MINNESOTA					
FC	BASSETT CREEK, MN	12,500	1,215	385	385
FC	CHASKA, MN	15,600	949	275	275
FC	EAST GRAND FORKS, MN	11,200	483	175	320
FC	ROCHESTER, MN	59,600	2,034	366	366
	STATE SUB-TOTALS	98,900	4,681	1,201	1,346
MISSISSIPPI					
N	YAZOO RIVER, MS	198,000	1,860	95	95
	STATE SUB-TOTALS	198,000	1,860	95	95
MISSOURI					
FC	HANNIBAL, MO	625	161	0	150
	STATE SUB-TOTALS	625	161	0	150
NEW JERSEY					
N	DELAWARE RIVER IN THE VICINITY OF CAMDEN, NJ	5,080	70	100	100
N	GREAT EGG HARBOR INLET AND PECK BEACH, NJ	17,500	388	0	100
	STATE SUB-TOTALS	22,580	458	100	200
NEW MEXICO					
FC	RIO GRANDE FLOODWAY, TRUTH OR CONSEQUENCES UNIT, NM	1,100	345	0	250
FC	SANTA FE RIVER AND ARROYO MASCARAS, NM	1,400	768	0	200
	STATE SUB-TOTALS	2,500	1,113	0	450
OHIO					
N	GENEVA-ON-THE-LAKE, OH	2,920	812	50	138
FC	RENO BEACH - HOWARD FARMS AREA, OH	2,620	254	90	90
	STATE SUB-TOTALS	5,540	1,066	140	228
OKLAHOMA					
N	BIG AND LITTLE SALLISAW CREEKS, OK	3,000	235	135	135
	STATE SUB-TOTALS	3,000	235	135	135
OREGON					
FC	JOHNSON CREEK, OR	5,820	181	0	145
FC	PENINSULA DRAINAGE DISTRICT #2, OR	2,080	35	0	290
	STATE SUB-TOTALS	7,900	216	0	435
PENNSYLVANIA					
FC	FRANCIS E. WALTER DAM, PA	70,800	1,259	1,100	1,400
FC	HAY CREEK, BIRDSBORO, PA	2,845	365	0	100
FC	TAMAQUA, PA	7,965	525	600	600
	STATE SUB-TOTALS	81,610	2,149	1,700	2,100
RHODE ISLAND					
N	BRISTOL HARBOR, RI	3,900	322	30	30
	STATE SUB-TOTALS	3,900	322	30	30
TEXAS					
FC	BIG SANDY LAKE, TX	99,100	765	140	140
FC	CLEAR CREEK, TX	62,900	2,418	260	282
FC	MILLICAN LAKE, TX	264,000	3,300	600	600
N	NECHES RIV & TRIBS, SALTWATER BARRIER AT BEAUMONT, TX	29,700	1,455	0	195
MP	TRINITY RIVER, TX	985,000	13,094	308	308
	STATE SUB-TOTALS	1,440,700	21,032	1,308	1,525

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CAPABILITIES FOR A E & D PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
VIRGINIA					
FC	VIRGINIA BEACH STREAMS, CANAL #2, VA....	4,505	302	0	95
	STATE SUB-TOTALS	4,505	302	0	95
WISCONSIN					
FC	STATE ROAD AND EBNER COULEES, WI........	21,500	935	202	400
	STATE SUB-TOTALS	21,500	935	202	400
	NATIONAL TOTALS	2,986,000	60,730	10,467	16,107
	NATIONAL TOTALS	2,986,000	60,730	10,467	16,107

PROJECTS AVAILABLE FOR INITIATION OF CONSTRUCTION

[Amounts in thousands]

CALIFORNIA					
FC	SAN JACINTO RIVER LEVEE AND BAUTISTA ... CREEK CHANNEL, CA......................	10,657	3,377	2,000	2,000
	STATE SUB-TOTALS	10,657	3,377	2,000	2,000
MASSACHUSETTS					
BE	LYNN - NAHANT BEACH, MA (REIMB).........	1,375	0	875	875
	STATE SUB-TOTALS	1,375	0	875	875
	NATIONAL TOTALS	12,032	3,377	2,875	2,875
	NATIONAL TOTALS	12,032	3,377	2,875	2,875

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY

[Amounts in thousands]

ALABAMA					
MP	JONES BLUFF LOCK & DAM, AL...............	84,600	83,500	600	600
N	TENNESSEE TOMBIGBEE WATERWAY, AL & MS...	1,830,000	1,300,095	186,000	191,000
	STATE SUB-TOTALS	1,914,600	1,383,595	186,600	191,600
ALASKA					
FC	CHENA RIVER LAKES, AK..................	279,000	172,849	11,300	11,300
	STATE SUB-TOTALS	279,000	172,849	11,300	11,300
ARIZONA					
FC	INDIAN BEND WASH, AZ.....................	31,400	24,381	6,000	7,019
FC	PHOENIX AND VICINITY, AZ (STAGE 2 & .... REMAINING WORK).........................	321,000	22,249	4,000	4,560
	STATE SUB-TOTALS	352,400	46,630	10,000	11,579
ARKANSAS					
N	MCCLELLAN-KERR ARK RIVER NAVIGATION .... SYSTEM LOCK & DAMS, AR & OK.............	543,000	533,196	5,002	5,002
MP	NORFORK LAKE HIGHWAY BRIDGE .... CONSTRUCTION, AR.........................	41,600	37,982	3,618	3,618
N	OUACHITA AND BLACK RIVERS, AR & LA......	278,000	179,472	20,400	21,155
	STATE SUB-TOTALS	862,600	750,648	29,020	29,775
CALIFORNIA					
N	CRESCENT CITY HARBOR, CA...............	3,650	3,298	352	352
FC	CUCAMONGA CREEK, CA.....................	113,000	89,797	11,500	11,500
FC	DRY CREEK (WARM SPRINGS) LAKE AND ...... CHANNEL, CA.............................	315,000	229,287	12,300	33,400

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CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
N	LOS ANGELES - LONG BEACH HARBORS, CA....	30,500	25,177	5,325	5,323
HP	NEW MELONES LAKE, CA....................	380,000	324,189	5,500	5,500
FC	SACRAMENTO RIVER BANK PROTECTION .... PROJECT, CA..............................	110,000	45,167	700	700
FC	SACRAMENTO RIVER & MAJOR AND MINOR ..... TRIBUTARIES, CA.........................	11,900	11,337	200	200
N	SAN FRANCISCO BAY TO STOCKTON, CA.......	173,000	10,809	4,000	5,700
BE	SURFSIDE-SUNSET & NEWPORT BEACH (ORANGE. COUNTY), CA...........................	24,500	6,214	0	500
FC	WALNUT CREEK, CA........................	78,600	32,191	6,300	6,300
	STATE SUB-TOTALS	1,240,150	777,466	46,175	69,275
COLORADO					
FC	CHATFIELD LAKE, CO......................	93,200	86,402	2,000	2,000
FC	TRINIDAD LAKE, CO (DAM SAFETY .... ASSURANCE)................................	7,200	3,500	3,700	3,700
	STATE SUB-TOTALS	100,400	89,902	5,700	5,700
CONNECTICUT					
FC	NEW LONDON HURRICANE BARRIER, CT........	7,700	6,085	860	860
	STATE SUB-TOTALS	7,700	6,085	860	860
DELAWARE					
N	INLAND WATERWAY, DELAWARE .... RIVER-CHESAPEAKE BAY(C&D CANAL), DE & MD	133,400	99,252	0	200
	STATE SUB-TOTALS	133,400	99,252	0	200
DIST OF COLUMBIA					
FC	POTOMAC ESTUARY PILOT WATER TREATMENT .. PLANT, DC................................	21,400	18,196	3,204	3,204
	STATE SUB-TOTALS	21,400	18,196	3,204	3,204
FLORIDA					
N	CANAVERAL HARBOR, FL....................	31,500	5,962	1,000	1,000
FC	CENTRAL AND SOUTHERN FLORIDA, FL........	1,460,000	260,956	11,000	11,000
FC	DADE COUNTY, FL.........................	89,800	33,239	2,200	2,200
FC	FOUR RIVER BASINS, FL...................	263,000	65,671	4,600	4,600
N	TAMPA HARBOR MAIN CHANNEL, FL...........	178,000	122,470	27,500	27,500
	STATE SUB-TOTALS	1,982,300	488,298	46,300	46,300
GEORGIA					
HP	HARTWELL LAKE FIFTH UNIT, GA & SC.......	18,100	13,405	4,695	4,695
HP	RICHARD B. RUSSELL DAM AND LAKE, GA & .. SC....................................	507,000	282,321	70,000	70,000
BE	TYBEE ISLAND, GA........................	5,730	2,515	0	345
	STATE SUB-TOTALS	530,830	298,241	74,695	75,040
HAWAII					
N	BARBERS POINT HARBOR, OAHU, HI..........	57,900	11,890	27,000	27,000
	STATE SUB-TOTALS	57,900	11,890	27,000	27,000
IDAHO					
HP	DWORSHAK DAM AND RESERVOIR, ID..........	329,000	319,874	2,050	3,525
FC	PLACER CREEK, ID........................	5,950	4,780	1,170	1,270
	STATE SUB-TOTALS	334,950	324,654	3,220	4,795
ILLINOIS					
FC	EAST MOLINE, IL.........................	9,690	8,450	1,230	1,230
FC	EAST ST. LOUIS AND VICINITY, IL.........	45,000	7,643	2,700	2,700
FC	FULTON, IL..............................	18,400	17,075	1,325	1,325
FC	KASKASKIA ISLAND DRAINAGE AND LEVEE .... DISTRICT, IL..............................	16,800	3,518	1,400	1,400
N	KASKASKIA RIVER NAVIGATION, IL..........	162,000	122,191	1,700	1,700
N	LOCK AND DAM NO. 26, MISSISSIPPI RIVER,. ALTON, IL & MO............................	770,000	131,847	68,200	68,200
FC	MCGEE CREEK DRAINAGE AND LEVEE DISTRICT, IL....................................	24,800	10,322	8,510	10,275
FC	MILAN, IL...............................	13,900	4,008	4,000	4,000
FC	ROCKFORD, IL............................	8,890	6,429	400	400
N	SMITHLAND LOCKS AND DAM, IL, IN, & KY...	276,700	263,076	3,450	3,450
FC	WOOD RIVER DRAINAGE AND LEVEE DISTRICT,. IL....................................	18,700	15,355	900	900
	STATE SUB-TOTALS	1,371,470	589,864	93,815	95,580

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CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
INDIANA					
FC	EVANSVILLE, IN.	53,400	23,869	3,500	3,500
FC	LEVEE UNIT 5, IN.	8,480	6,890	1,040	1,040
	STATE SUB-TOTALS	61,880	30,759	4,540	4,540
IOWA					
FC	BETTENDORF, IA.	14,500	1,327	2,480	2,480
FC	CORALVILLE LAKE, IA.	28,944	19,807	2,900	4,200
FC	LITTLE SIOUX RIVER, IA.	19,233	15,483	250	250
FC	MISSOURI RIVER LEVEE SYSTEM, IA, NE, KS. & MO.	287,000	80,219	2,200	2,200
FC	SAYLORVILLE LAKE, IA.	105,050	96,143	1,960	1,960
FC	WATERLOO, IA.	52,300	44,147	1,253	1,253
	STATE SUB-TOTALS	507,027	257,126	11,043	12,343
KANSAS					
FC	EL DORADO LAKE, KS.	91,100	75,909	4,700	4,700
	STATE SUB-TOTALS	91,100	75,909	4,700	4,700
KENTUCKY					
FC	BIG SOUTH FORK NATIONAL RIVER & RECREATION AREA, KY & TN.	103,522	51,356	10,875	13,000
FC	CAVE RUN LAKE, KY.	79,900	69,175	1,450	1,450
MP	LAUREL RIVER LAKE, KY.	59,400	59,468	2,170	2,170
FC	PAINTSVILLE LAKE, KY.	61,000	45,457	6,000	6,000
FC	SOUTHWESTERN JEFFERSON COUNTY, KY.	68,700	35,753	12,000	12,000
FC	TAYLORSVILLE LAKE, KY.	99,400	66,080	13,750	13,750
	STATE SUB-TOTALS	471,922	324,289	46,245	48,370
LOUISIANA					
FC	BAYOU BODCAU AND TRIBUTARIES, LA.	33,700	4,557	500	500
FC	GRAND ISLE AND VICINITY, LA (HURRICANE PROTECTION).	9,400	1,650	5,000	5,000
FC	LAKE PONTCHARTRAIN AND VICINITY, LA (HURRICANE PROTECTION).	700,000	130,564	18,800	18,800
FC	LAROSE TO GOLDEN MEADOW, LA (HURRICANE PROTECTION).	60,900	18,932	11,000	11,000
N	LELAND BOWMAN LOCK, LA (REPLACEMENT).	31,700	9,245	14,000	14,000
N	MISSISSIPPI RIVER - GULF OUTLET, LA.	592,000	77,950	2,000	2,000
N	MISSISSIPPI RIVER, BATON ROUGE TO THE GULF OF MEXICO, LA.	161,000	16,000	900	900
FC	MORGAN CITY AND VICINITY, LA.	58,600	754	350	350
FC	NEW ORLEANS TO VENICE, LA (HURRICANE PROTECTION).	171,000	45,204	3,450	3,450
N	RED RIVER WATERWAY - MISSISSIPPI RIVER TO SHREVEPORT, LA.	1,404,000	373,871	30,000	30,000
	STATE SUB-TOTALS	3,222,300	678,727	86,000	86,000
MARYLAND					
FC	BLOOMINGTON LAKE, MD & WV.	174,300	172,792	1,508	1,508
	STATE SUB-TOTALS	174,300	172,792	1,508	1,508
MASSACHUSETTS					
FC	CHARLES RIVER NATURAL VALLEY STORAGE AREA, MA.	8,070	7,535	535	535
N	FALL RIVER HARBOR, MA & RI.	62,200	1,325	3,600	3,600
	STATE SUB-TOTALS	70,270	8,860	4,135	4,135
MICHIGAN					
FC	SAGINAW RIVER, MI.	138,000	21,761	2,385	2,385
	STATE SUB-TOTALS	138,000	21,761	2,385	2,385
MINNESOTA					
FC	BIG STONE LAKE AND WHETSTONE RIVER, MN & SD.	13,100	9,815	500	1,400
FC	MANKATO & NORTH MANKATO, MN.	96,500	45,730	7,000	7,000
FC	WINONA, MN.	30,600	17,597	7,550	7,550
	STATE SUB-TOTALS	140,200	73,142	15,050	15,950

03/16/82 10.37
CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
MISSISSIPPI					
FC	TOMBIGBEE RIVER AND TRIBUTARIES, MS & AL	151,000	11,414	1,300	1,300
N	YAZOO RIVER - BELZONI BRIDGE, MS (ADVANCE PARTICIPATION)	8,570	7,054	1,516	1,516
	STATE SUB-TOTALS	159,570	18,468	2,816	2,816
MISSOURI					
FC	BLUE RIVER CHANNEL, KANSAS CITY, MO	141,000	6,145	8,200	8,200
MP	CLARENCE CANNON DAM AND MARK TWAIN LAKE, MO	303,000	263,487	15,400	15,400
MP	HARRY S. TRUMAN DAM AND RESERVOIR, MO	543,000	484,942	9,800	10,300
FC	LITTLE BLUE RIVER LAKES, MO	161,000	91,895	23,000	26,000
FC	LITTLE BLUE RIVER CHANNEL, MO	32,300	20,016	5,100	5,100
FC	LONG BRANCH LAKE, MO	19,800	17,561	550	550
N	MISS RIVER BTWN THE OHIO & MISSOURI RIVERS, MO & IL (REG WORKS)	231,000	93,946	2,100	2,895
FC	PERRY COUNTY DRAINAGE & LEVEE DISTRICTS, NO. 1, 2, & 3, MO	8,760	6,920	1,840	1,840
MP	STOCKTON LAKE, MO	79,300	76,500	2,800	2,800
	STATE SUB-TOTALS	1,519,160	1,062,012	68,790	73,085
MONTANA					
FC	GREAT FALLS, MT	11,300	3,782	4,000	4,000
MP	LIBBY ADDITIONAL UNITS, MT	52,800	32,627	10,200	10,300
	STATE SUB-TOTALS	64,100	36,409	14,200	14,300
NEBRASKA					
FC	PAPILLION CREEK AND TRIBUTARIES LAKES, NE	51,200	28,678	9,500	9,500
	STATE SUB-TOTALS	51,200	28,678	9,500	9,500
NEW JERSEY					
FC	ELIZABETH, NJ	63,500	34,344	10,800	10,800
	STATE SUB-TOTALS	63,500	34,344	10,800	10,800
NEW YORK					
N	CATTARAUGUS HARBOR, NY	4,500	2,750	1,750	1,750
FC	ELLICOTT CREEK, NY	18,600	1,819	0	200
FC	FIRE ISLAND INLET TO MONTAUK POINT, NY	275,000	9,128	1,200	1,200
N	NY HARBOR COLLECTION & REMOVAL OF DRIFT, NY & NJ	58,800	10,029	1,500	1,500
	STATE SUB-TOTALS	356,900	23,726	4,450	4,650
NORTH CAROLINA					
N	AIWW-REPLACEMENT OF FEDERAL HIGHWAY BRIDGES, NC	66,700	6,872	4,550	4,550
FC	B. EVERETT JORDAN DAM AND LAKE, NC	143,000	91,267	2,000	3,800
FC	FALLS LAKE, NC	165,000	116,171	10,300	10,300
N	MANTEO (SHALLOWBAG) BAY, NC	114,000	4,361	1,000	1,000
	STATE SUB-TOTALS	488,700	218,671	17,850	19,650
NORTH DAKOTA					
FC	LAKE DARLING DAM, ND	86,400	500	1,000	1,200
	STATE SUB-TOTALS	86,400	500	1,000	1,200
OHIO					
FC	ALUM CREEK LAKE, OH	56,700	54,468	150	150
FC	CAESAR CREEK LAKE, OH	65,000	62,186	620	620
FC	CHILLICOTHE, OH	22,100	20,054	2,046	2,046
FC	CUYAHOGA RIVER BASIN, OH	20,300	1,057	0	700
FC	MILL CREEK, OH	209,000	11,312	10,400	10,400
FC	NEWARK, OH	10,800	4,839	300	300
FC	POINT PLACE, OH	8,900	1,699	2,300	2,300
N	WEST HARBOR, OH	3,150	2,835	315	315
	STATE SUB-TOTALS	435,950	158,452	16,131	16,831

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CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
OKLAHOMA					
FC	ARCADIA LAKE, OK	92,000	33,335	22,600	22,600
FC	COPAN LAKE, OK	72,000	69,672	300	300
FC	SARDIS LAKE, OK	54,900	51,107	1,200	1,200
FC	SKIATOOK LAKE, OK	112,000	80,165	10,000	10,000
	STATE SUB-TOTALS	330,900	234,279	34,100	34,100
OREGON					
HP	BONNEVILLE SECOND POWERHOUSE, OR & WA	662,000	595,336	26,400	26,400
HP	JOHN DAY LOCK AND DAM, LAKE UMATILLA, OR & WA	517,000	483,197	3,700	7,000
FC	LOWER COLUMBIA RIVER BASIN BANK PROTECTION, OR & WA	29,100	13,125	2,300	2,400
FC	WILLAMETTE RIVER BASIN BANK PROTECTION, OR	34,600	21,887	2,800	2,800
FC	WILLOW CREEK LAKE, HEPPNER, OR	37,000	26,926	8,000	8,000
	STATE SUB-TOTALS	1,279,700	1,140,431	43,200	46,600
PENNSYLVANIA					
BE	PRESQUE ISLE, PA	13,646	8,546	1,100	1,100
FC	WYOMING VALLEY, PA (REMEDIAL WORK)	29,400	14,025	2,700	2,700
	STATE SUB-TOTALS	43,046	22,571	3,800	3,800
PUERTO RICO					
FC	PORTUGUES AND BUCANA RIVERS, PR	295,000	60,136	29,000	29,000
	STATE SUB-TOTALS	295,000	60,136	29,000	29,000
SOUTH CAROLINA					
N	COOPER RIVER, CHARLESTON HARBOR, SC	161,000	136,040	19,940	19,940
N	LITTLE RIVER INLET, SC & NC	18,300	9,419	5,800	5,800
	STATE SUB-TOTALS	179,300	145,459	25,740	25,740
TEXAS					
FC	AQUILLA LAKE, TX	50,000	42,457	5,500	5,500
FC	ARKANSAS - RED RIVER BASINS CHLORIDE CONTROL (AREA VIII), TX	52,800	40,071	5,100	5,100
FC	COOPER LAKE AND CHANNELS, TX	169,000	22,653	1,500	1,500
N	CORPUS CHRISTI SHIP CHANNEL, TX (1968 ACT)	87,600	24,584	4,000	6,000
FC	EL PASO, TX	74,000	38,679	6,000	6,000
FC	HIGHLAND BAYOU, TX	19,500	11,834	300	300
FC	LAKEVIEW LAKE, TX	220,000	110,588	27,800	27,800
N	MOUTH OF THE COLORADO RIVER, TX	29,900	1,800	0	4,500
FC	RAY ROBERTS LAKE, TX	286,100	22,395	37,000	54,000
FC	SAN ANTONIO CHANNEL IMPROVEMENT, TX	70,500	35,018	3,300	5,000
FC	SAN GABRIEL RIVER, TX	146,000	99,252	550	550
FC	TAYLORS BAYOU, TX	73,000	2,843	1,700	2,700
FC	TEXAS CITY AND VICINITY, TX (HURRICANE FLOOD PROTECTION)	37,600	34,730	2,870	2,870
FC	THREE RIVERS, TX	5,890	5,121	769	769
FC	VINCE AND LITTLE VINCE BAYOUS, TX	18,100	6,868	2,000	2,000
	STATE SUB-TOTALS	1,339,990	498,893	98,389	124,589
VIRGINIA					
BE	VIRGINIA BEACH, VA (1962 MODIFICATION) (REIMB)	5,500	3,116	380	380
	STATE SUB-TOTALS	5,500	3,116	380	380
WASHINGTON					
HP	CHIEF JOSEPH DAM ADDITIONAL UNITS, WA	362,000	309,064	16,000	16,000
HP	LOWER GRANITE LOCK AND DAM, WA & ID	321,600	319,197	2,403	2,403
HP	LOWER SNAKE RIVER FISH AND WILDLIFE COMPENSATION, WA, OR & ID	181,000	49,390	27,000	27,000
	STATE SUB-TOTALS	864,600	677,651	45,403	45,403
WEST VIRGINIA					
FC	BEECH FORK LAKE, WV	47,300	36,992	1,300	1,300
FC	BURNSVILLE LAKE, WV	58,500	50,595	2,850	2,850
FC	R D BAILEY LAKE, WV	193,000	185,322	3,300	3,300
FC	STONEWALL JACKSON LAKE, WV	201,000	62,975	16,200	16,200
	STATE SUB-TOTALS	495,800	335,884	23,650	23,650

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CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
WISCONSIN					
FC	PRAIRIE DU CHIEN, WI....................	4,020	3,859	161	161
	STATE SUB-TOTALS	4,020	3,859	161	161
	NATIONAL TOTALS	22,129,435	11,404,474	1,162,815	1,238,354
	NATIONAL TOTALS	22,129,435	11,404,474	1,162,815	1,238,354

MAJOR REHABILITATION AND DAM SAFETY ASSURANCE PROJECTS AVAILABLE FOR INITIATION

[Amounts in thousands]

GEORGIA					
MP	WALTER F. GEORGE LOCK AND DAM, GA & AL..	31,100	3,800	7,375	7,375
	STATE SUB-TOTALS	31,100	3,800	7,375	7,375
ILLINOIS					
N	ILLINOIS WATERWAY, LOCKPORT L & D, IL .. (REHAB)................................	17,000	0	500	500
	STATE SUB-TOTALS	17,000	0	500	500
	NATIONAL TOTALS	48,100	3,800	7,875	7,875
	NATIONAL TOTALS	48,100	3,800	7,875	7,875

CAPABILITIES FOR MAJOR REHABILITATION AND DAM SAFETY ASSURANCE PROJECTS UNDERWAY

[Amounts in thousands]

GEORGIA					
MP	HARTWELL LAKE UPPER & LOWER DIVERSION .. DAMS, GA & SC (REHAB)..................	9,900	3,500	5,000	5,000
	STATE SUB-TOTALS	9,900	3,500	5,000	5,000
HAWAII					
N	KAHULUI HARBOR, MAUI, HI (REHAB)........	6,300	364	4,500	4,500
	STATE SUB-TOTALS	6,300	364	4,500	4,500
ILLINOIS					
N	ILLINOIS WATERWAY, DRESDEN ISLAND L & D, IL (REHAB).............................	15,500	14,764	736	736
N	ILLINOIS WATERWAY, STARVED ROCK L & D, . IL (REHAB).............................	11,800	11,301	499	499
N	LOCKS AND DAM 53, IL & KY (REHAB).......	6,300	3,157	1,200	1,200
N	LOCKS AND DAM 52, IL & KY (REHAB).......	9,900	7,601	800	800
	STATE SUB-TOTALS	43,500	36,823	3,235	3,235
MASSACHUSETTS					
N	CAPE COD CANAL HIGHWAY BRIDGES, MA ..... (REHAB)................................	25,200	23,465	1,735	1,735
	STATE SUB-TOTALS	25,200	23,465	1,735	1,735
OHIO					
FC	MUSKINGUM RIVER LAKES, OH (REHAB).......	78,800	13,870	3,800	3,800
FC	MUSKINGUM RIVER LAKES, OH (DAM SAFETY .. ASSURANCE).............................	94,900	2,400	5,200	5,200
	STATE SUB-TOTALS	173,700	16,270	9,000	9,000
OREGON					
N	COLUMBIA RIVER AT THE MOUTH, SOUTH ..... JETTY, OR & WA (REHAB).................	3,160	2,700	460	460
	STATE SUB-TOTALS	3,160	2,700	460	460

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CAPABILITIES FOR MAJOR REHABILITATION & DAM SAFETY ASSURANCE PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
PENNSYLVANIA					
N	EMSWORTH LOCKS AND DAM, OHIO RIVER, PA (REHAB)	36,000	16,715	9,500	9,500
FC	KINZUA DAM AND ALLEGHENY RESERVOIR, PA & NY (REHAB)	6,000	950	5,050	5,050
	STATE SUB-TOTALS	42,000	17,665	14,550	14,550
WASHINGTON					
N	LAKE WASHINGTON SHIP CANAL, WA (REHAB)	7,650	1,500	3,000	3,000
FC	MILL CREEK LAKE, WA (REHAB)	15,400	9,956	3,400	4,300
	STATE SUB-TOTALS	23,250	11,456	6,400	7,300
	NATIONAL TOTALS	327,010	112,243	44,880	45,780
	NATIONAL TOTALS	327,010	112,243	44,880	45,780

STUDIES AVAILABLE FOR INITIATION

[Amounts in thousands]

ARKANSAS					
FDP	GRAHAM BURKE PUMPING PLANT, LOWER WHITE RIVER, AR	550	0	0	185
	STATE SUB-TOTALS	550	0	0	185
KENTUCKY					
N	HICKMAN HARBOR, KY	1,125	0	0	190
	STATE SUB-TOTALS	1,125	0	0	190
TENNESSEE					
FDP	TIPTONVILLE, TN	380	0	0	160
	STATE SUB-TOTALS	380	0	0	160
	NATIONAL TOTALS	2,055	0	0	535
	NATIONAL TOTALS	2,055	0	0	535

CAPABILITIES FOR STUDIES UNDERWAY

[Amounts in thousands]

ARKANSAS					
FDP	BOEUF - TENSAS BASIN, SOUTH AR & NORTH LA	5,720	2,027	595	1,095
FDP	HELENA, AR, AND VICINITY	670	625	65	65
FDP	ST.FRANCIS BASIN BELOW WAPPAPELLO, AR & MO	3,160	1,545	425	625
FDP	WEST MEMPHIS, AR	975	867	108	108
	STATE SUB-TOTALS	10,525	5,064	1,193	1,893
ILLINOIS					
FDP	MISSISSIPPI RIVER, EAST BANK, VICKSBURG-YAZOO AREA, MS (PHASE I)	345	150	0	120
	STATE SUB-TOTALS	345	150	0	120
KENTUCKY					
FDP	BAYOU DU CHIEN, KY	615	270	0	135
FDP	MAYFIELD CREEK AND TRIBUTARIES, KY	810	193	217	217
FDP	MISSISSIPPI RIVER, KY & TN, EAST BANK LEVEES	950	197	0	100
	STATE SUB-TOTALS	2,375	660	217	452

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CAPABILITIES FOR STUDIES UNDERWAY
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
LOUISIANA					
FDP	ATCHAFALAYA BASIN (WATER & LAND RESOURCES), LA	6,210	5,146	310	310
FDP	LARTO LAKE - SALINE LAKE AREA, LA	1,290	514	0	240
	STATE SUB-TOTALS	7,500	5,660	310	550
MISSISSIPPI					
FDP	YAZOO RIVER BASIN, MS	8,190	5,154	985	985
	STATE SUB-TOTALS	8,190	5,154	985	985
MISSOURI					
FDP	ST. FRANCIS RIVER, MO & AR (FISH & WILDLIFE)	820	210	0	355
	STATE SUB-TOTALS	820	210	0	355
TENNESSEE					
FDP	OBION AND FORKED DEER RIVERS AND TRIBUTARIES, TN & KY	1,350	546	0	200
FDP	WOLF AND LOOSAHATCHIE RIVERS AND NONCONNAH CREEK, TN & MS	1,635	1,571	64	64
	STATE SUB-TOTALS	2,985	2,117	64	264
	NATIONAL TOTALS	32,740	19,015	2,769	4,619
	NATIONAL TOTALS	32,740	19,015	2,769	4,619

CAPABILITIES FOR CONTINUATION OF PLANNING AND ENGINEERING

[Amounts in thousands]

ARKANSAS					
FC	EIGHT MILE CREEK, AR	710	0	0	275
N	HELENA HARBOR, AR	870	0	0	300
	STATE SUB-TOTALS	1,580	0	0	575
LOUISIANA					
FC	BUSHLEY BAYOU, LA (PHASE I)	1,301	370	0	400
FC	LOUSIANA STATE PENITENTIARY LEVEE, MISSISSIPPI RIVER, LA	1,000	0	0	450
	STATE SUB-TOTALS	2,301	370	0	850
MISSISSIPPI					
FC	HORN LAKE CREEK AND TRIBUTARIES, MS & TN	250	0	0	150
N	VICKSBURG HARBOR, MS	1,300	0	0	300
	STATE SUB-TOTALS	1,550	0	0	450
MISSOURI					
FC	ST. JOHN'S BAYOU AND NEW MADRID FLOODWAY, MO (PHASE I)	1,216	250	600	600
	STATE SUB-TOTALS	216	250	600	600
TENNESSEE					
N	MISSISSIPPI RIVER, MEMPHIS, TN	870	0	0	300
FC	NONCONNAH CREEK, TN & MS	810	0	0	250
	STATE SUB-TOTALS	1,680	0	0	550
	NATIONAL TOTALS	8,327	620	600	3,025
	NATIONAL TOTALS	8,327	620	600	3,025

PROJECTS AVAILABLE FOR INITIATION OF A.E. & D.

[Amounts in thousands]

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	ALLOCATIONS TO DATE	FY 1983 APPROVED BUDGET	FY 1983 CAPABILITY
LOUISIANA					
FC	MISSISSIPPI DELTA REGION, LA, SALINITY CONTROL STRUCTURE	26,400	0	0	1,400
	STATE SUB-TOTALS	26,400	0	0	1,400
	NATIONAL TOTALS	26,400	0	0	1,400
	NATIONAL TOTALS	26,400	0	0	1,400

CAPABILITIES FOR A.E. & D. PROJECTS UNDERWAY

[Amounts in thousands]

ARKANSAS					
FC	L'ANGUILLE RIVER BASIN, AR	22,600	500	200	550
	STATE SUB-TOTALS	22,600	500	200	550
LOUISIANA					
FC	EASTERN RAPIDES & SOUTH CENTRAL AVOYELLES PARISHES, LA	53,700	1,001	0	50
	STATE SUB-TOTALS	53,700	1,001	0	50
	NATIONAL TOTALS	76,300	1,501	200	600
	NATIONAL TOTALS	76,300	1,501	200	600

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY

[Amounts in thousands]

ARKANSAS					
FC	CHANNEL IMPROVEMENT, AR, IL, KY, LA, MO, MS, & TN	5,206,000	1,226,524	51,800	0
FC	MISSISSIPPI RIVER LEVEES, AR, IL, KY, LA, MO, MS, & TN	1,725,000	477,221	31,000	44,000
FC	ST. FRANCIS BASIN, AR & MO	389,000	221,715	5,730	11,280
FC	TENSAS BASIN, AR & LA	655,000	162,143	20,300	32,800
	STATE SUB-TOTALS	7,975,000	2,087,603	108,830	88,880
KENTUCKY					
FC	REELFOOT LAKE, LAKE NO. 9, KY & TN	10,410	8,285	170	170
	STATE SUB-TOTALS	10,410	8,285	170	170
LOUISIANA					
FC	ATCHAFALAYA BASIN, LA	2,800,000	412,319	28,300	48,300
FC	BAYOU COCODRIE AND TRIBUTARIES, LA	39,500	4,189	100	100
FC	LOWER RED RIVER - SOUTH BANK LEVEES, LA.	47,200	18,396	800	1,100
FC	OLD RIVER, LA	383,000	103,017	54,800	57,600
FC	TECHE-VERMILION BASINS, LA (ADDITIONAL SURFACE WATER SUPPLY)	35,700	33,429	2,271	2,271
	STATE SUB-TOTALS	3,305,400	571,350	86,271	109,371
MISSISSIPPI					
FC	YAZOO BASIN, MS	1,616,000	350,616	15,500	26,000
	STATE SUB-TOTALS	1,616,000	350,616	15,500	26,000
TENNESSEE					
FC	MUD LAKE PUMPING STATION, TN	5,230	740	325	325
FC	WEST TENNESSEE TRIBUTARIES, TN	115,000	23,741	2,400	4,000
	STATE SUB-TOTALS	120,230	24,481	2,725	4,325
	NATIONAL TOTALS	13,027,040	3,042,335	213,496	228,746
	NATIONAL TOTALS	13,027,040	3,042,335	213,496	228,746

OREGON WATER RESOURCE PROJECTS

ROGUE RIVER AT GOLD BEACH STUDY

Question. What is the status of this investigation?

Answer. We will complete a technical report which will identify the best engineering solution to the shoaling problems and recommend a specific course of action in fiscal year 1982.

Question. What have been the findings of your model studies?

Answer. We will complete our model studies testing program this summer. Our model testing program includes the testing of various types of constructions between the existing breakwaters, various alinements of jetty extensions, and the separation of the boat basin entrance from the river by a separate jetty system. A total of 58 variations of these three alternatives are being examined. Preliminary cost estimates of these modifications range from $1 to $30 million.

Question. When will you be able to make a recommendation on the best engineering solution?

Answer. We will complete a technical report identifying the best engineering solution to the shoaling problem in September 1982.

Question. What is your fiscal year 1983 capability for this study and what could you accomplish with this capability?

Answer. We have a fiscal year 1983 capability of $90,000 to resume the study to reinforce the existing breakwater for the small boat basin. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

OPERATION AND MAINTENANCE PROJECT ELIMINATION AND REDUCTIONS

Question. The fiscal year 1983 operation and maintenance budget request for the North Pacific Division does not include funds for the many Oregon coastal projects and other projects that are normally funded in Washington and Alaska. Would you provide for the record a listing of these projects that have been eliminated from your program, their capabilities, and impacts if funding is not restored.

Answer. We have 22 projects that have been eliminated or funded at reduced levels. I will provide the data on these projects for the record. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

[The information follows:]

NORTH PACIFIC DIVISION OPERATION AND MAINTENANCE PROJECT ELIMINATION AND REDUCTIONS

Project	FY 1983 Budget Request ($000)	FY 1983 Capability ($000)	Impact
Dillingham Harbor, Alaska	0	422	Harbor totally unusable first year. Would impact 85% of total city workforce (commercial fishing).
Ketchikan Bar Point Small Boat Harbor, Alaska	0	22	Lack of maintenance could result in failure of floating breakwater. This, in turn, would cause damage of up to 400 vessels (commercial and/or recreational).
Ninilchik Harbor, Alaska	0	238	Half tide harbor would become 50% unusable the first year and completely unusable in 3 years. This would impact about 100 fishing vessels.
Stikine River, Alaska	0	24	Lack of snagging would cause severe hazard to river navigation, barges, government and recreation craft. Impact on Canadian Treaty.
Chetco River, Oregon	0	472	Impacts to local mills as well as commercial and recreational fishing. About 20% of total workforce impacted.
Coos and Millicoma Rivers, Oregon	0	158	Impact shipment of wood products, totaling about 1.8 million tons annually.
Coquille River, Oregon	0	776	Impact to wood products industry as well as commercial and recreational fishing; 20% of local workforce would be impacted.
Rogue River at Gold Beach, Oregon	0	1,315	Impact to commercial and sports fisheries; 25% of local workforce would be impacted by port closure.
Yaquina River, Oregon	0	591	Impact to shallow draft shipment of wood products. Would eventually impact up to 50% of Toledo, Oregon, workforce.
Columbia River at Baker Bay, Washington	0	206	Impact up to 800 commercial fishing and charter boats. Boat basin would close by 1985 affecting 60% of local workforce.
Columbia River between Chinook and Sand Island, Washington	0	661	Impact commercial fishing fleet up to 50% of local workforce would be affected.
Lake River, Washington	0	36	Impact to movement of log rafts totaling about 22,000 tons annually.

Project	FY 1983 Budget Request ($000)	FY 1983 Capability ($000)	Impact
Quillayute River, Washington	0	4,750	Impact commercial fishing as well as Coast Guard's Search and Rescue. Could cause loss of life.
Skamokawa Creek, Washington	0	41	Limit use by 4 gillnetters. Also, public boat ramp used to launch recreational boats would be impacted.
Swinomish Channel, Washington	0	290	Impact to commercial towing totaling about 900,000 tons annually and recreational fishing.
Willamette River at Willamette Falls Locks, Oregon	430	804	Limit amount of maintenance and preclude dredging. By 1985, would cause some delays.
Homer Harbor, Alaska	0	265	Impacts to commercial fishing and processing. Impact up to 50% of total city workforce.
Siuslaw River, Oregon	0	1,429	Impact to shipment of wood products and commercial and recreational fishing. Impact to 20% of the local workforce is expected.
Umpqua River, Oregon	0	1,688	Impact shipments of wood products, sand and gravel, petroleum and commercial sports fishing. Impact up to 10 percent of local workforce.
Yaquina Bay and Harbor, Oregon	0	836	Impacts to wood products industry, commercial fishing, charter boats and seafood processing industry.
Grays Harbor and Chehalis River, Washington	0	3,575	Estimated that 50% of deep draft shipping will be lost in 1984 worth $22 million. By 1985, all shipping closed.
Lake Washington Ship Canal, Washington	396	2,709	Impact 2,000,000 tons/year of commerce, to various industries and commercial fishing. Also impacts Coast Guard, National Oceanographic and Atmospheric Administration, and recreation craft.

MAINTENANCE OF OREGON COASTAL PROJECTS

Question. In this regard, what is the capability in fiscal year 1983 for the hopper dredging of shallow-draft Oregon coastal projects? What would this capability accomplish? How many days would the *Pacific* and *Yaquina* be scheduled if these funds are provided? How many days are the *Pacific* and *Yaquina* each scheduled for fiscal year 1983 in the budget request.

Answer. We have a fiscal year 1983 capability of $2,736,000 for the hopper dredge *Pacific* and a capability of $3,592,000 for the dredge *Yaquina*, or a total capability of $6,328,000 for hopper dredging work on Oregon coastal projects. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects. If capability funds were provided, the dredges *Pacific* and *Yaquina* would operate 170 and 179 days, respectively, or a total of 349 days. The fiscal year 1983 budget request would provide funds for a total of 18 days of hopper dredging work on the Oregon coast.

Question. What are your fiscal year 1983 plans for these two dredges? What will be the impact if these two dredges are laid up?

Answer. The fiscal year 1983 budget request does not provide sufficient funds to mobilize and operate these dredges. Accordingly, these two dredges will have to be laid up. A total of 76 permanent and 27 seasonal dredge and direct-support personnel would be cut if these two dredges are laid up. An additional 25 engineering and administrative personnel would also be lost if the Oregon operation and maintenance funds are not restored.

JOHN DAY LOCK AND DAY

Question. I note that the scheduled completion date for the fish facilities at the John Day lock and dam project has been delayed by 1 year. What is the reason for this delay?

Answer. Fiscal year 1983 funding contraints were the reason for the 1-year slip in the completion date of these facilities.

Question. What is your fiscal year 1983 capability? If these funds are provided, could you advance the completion date to the prior schedule?

Answer. We have a fiscal year 1983 capability of $7 million which would permit the advancement of the completion of the fish facilities by 1 year from September 1986 to September 1985. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

Question. What is the impact on this project if capability funds are not provided?

Answer. The John Day project is regarded as a major loss source for juvenile fish by the fisheries agencies because of its unique characteristics. The pool is over 76 miles long and has 500,000 acre-feet of storage which retards migration rates, increases predation potential, and increases the probability for residualism. In addition, the large powerhouse means that virtually all juvenile migrants will be subject to turbine mortalities. Finally, in the rare event spill passage is possible, John Day, because of its deep stilling basin, endangers fish with high supersaturated dissolved atmospheric gases.

The upper Columbia and Snake River runs of Chinook, Sockeye, and Coho salmon and steelhead trout must pass the John Day Dam as juveniles on their way to the sea. This includes fish produced in the mainstem Snake and mid-Columbia and such tributaries as the Okanogan, Methow, Wenatchee, Entiat, Clearwater, Salmon, Imnaha, Grande Ronde, Umatilla, and John Day Rivers.

Even though we are trapping and hauling many fish from the McNary project upstream, many fish will not be collected there and will be exposed to the hazards of the John Day project. For an average mid-1980's year, it is estimated that, because of inadequate juvenile fish facilities at John Day Dam, a loss of 873,000 juvenile fish annually would occur which could be saved by the planned facilities. This loss would result in the sport and commercial harvest of over 85,000 fish valued at approximately $8.2 million and a return to the river for reproduction of over 30,000 spawners. A value has not been assigned to the spawning escapement.

BANDON SMALL BOAT HARBOR, OREGON

Question. What is the status of the Bandon small harbor? What is your fiscal year 1983 capability? What would you accomplish if construction funds are provided in fiscal year 1983?

Answer. The project was approved for construction on November 18, 1981, and the plans and specifications, presently under preparation, are scheduled for completion in June 1982. We plan to initiate construction with funds allocated for fiscal year 1982. The fiscal year 1983 request includes $1,350,000 to complete construction of the project. We have no additional requirement in fiscal year 1983, therefore the capability is the budget amount.

CHARLESTON SMALL BOAT HARBOR, OREGON

Question. When will you complete your planning on the Charleston small harbor? What is your fiscal year 1983 capability for initiation of construction?

Answer. The study is scheduled to be completed in September 1982, so the project has not yet been approved. Our fiscal year 1983 construction capability is presently under review pending final determination of the proposed upfront financing policy.

WINCHESTER BAY SMALL BOAT HARBOR, OREGON

Question. Will you bring me up to date on your planning efforts on the Winchester Bay small boat harbor in Oregon. What is your fiscal year 1983 capability?

Answer. The study is scheduled for completion in May 1982 and the plans and specifications should be started shortly thereafter. Our fiscal year 1983 capability is presently under review pending final determination of the proposed upfront financing policy.

SIUSLAW SMALL BOAT HARBOR, OREGON

Question. Have you completed your studies on the Siuslaw small boat harbor? What is your fiscal year 1983 capability?

Answer. No sir, we have not completed the Siuslaw study at this time. We are having some discussions with the State on proposed land use changes, required if we are to build the project. We hope to complete these discussions in April of this year and, if we are successful, the report should be furnished shortly thereafter. We have a capability in fiscal year 1983 of $50,000 to start and complete the plans and specifications although these funds are not presently scheduled within the budget request. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

MOUNT ST. HELENS WORK

Question. Would you bring me up to date on the current Mount St. Helens emergency work program?

Answer. We have essentially completed the emergency phase of the Mount St. Helens work. Our fiscal year 1982 program will provide for removal of sediments at the mouth of the Cowlitz River and from the Columbia navigation channel, monitoring work on the Cowlitz and Toutle Rivers. We expect to continue this sediment removal and monitoring work and propose to initiate the reconnaissance study of the Cowlitz basin in fiscal year 1983. We will be in a standby status during fiscal year 1983 to resume emergency work activities that may become necessary under extreme winter storm events.

Question. As I understand, the scope of work for fiscal year 1982 has been decreased. What is the reduced estimate of sediment yield to the Cowlitz River and deposition in the Columbia River channel?

Answer. Our current estimate of sediment yield in the Cowlitz River for 1982 and 1983 is 20 million cubic yards per year. This is about one-third less than our previous projection. We predict that about 12 million cubic yards will enter the Columbia River this year and 15 million cubic yards in 1983. The remaining 13 million cubic yards will have settled out in the Cowlitz River.

Question. What is your current estimate of sediment deposition in the Cowlitz and Columbia Rivers in fiscal year 1983? What are the reasons for the reductions in the scope of work?

Answer. We estimate that with a no dredging program for the Toutle and Cowlitz Rivers, 13 million cubic yards of sediment will be deposited in the Cowlitz River channel, which will raise the channel bottom by about 7 feet. This will significantly degrade the current 500-year flood protection for the Cowlitz River to approximately a 100-year protection. With no further Cowlitz-Toutle River dredging, approximately 8 million cubic yards of materials will be deposited in the Columbia River navigation channel. Our fiscal year 1983 operation and maintenance program will provide for the removal of 3.5 million cubic yards of the expected infill in the Columbia.

Subsequent to completion of our report on long-term programs for the Cowlitz and Toutle River basins in July 1981, we have gained much additional experience and data. Several flood events have given us new information on hydrology; we have completed extensive field surveys and sedimentation data collections and we also finalized computer analyses of the sediment infill in the two rivers. Based on these more detailed studies, we now conclude that up to 20 million cubic yards of material could settle in the Cowlitz and Columbia River channels, which is about one-third less than our previous estimate. The primary reasons for the reduction in the sediment yield to the Cowlitz River are as follows:

Initial channel development in the vast mudflow and sediment fields of the Toutle River basin have occurred.

Minor stream armoring has occurred, and larger floods are required to breach the armor and move material.

Suspended sediments in the river system last winter were as high as 300,000 parts per million. Similar samples now indicate sediment loads of about 100,000 parts per million.

The hydrologic response (rainfall runoff) of the Toutle River basin has proven similar to pre-eruption conditions. Earlier assumptions had anticipated a flash flood situation from the 150 square mile denuded area.

Sediment samplings and further study in fiscal years 1981 and 1982 indicate that 20 million cubic yards of sand is delivered to the Cowlitz in an average water-year versus the 35 million cubic yards previously estimated. Our estimate of infill into the Columbia River also has been lowered to reflect new information and changed physical conditions in the area, including the following considerations:

The river cross-section near Longview has been constricted by placement of spoil disposal which increases velocities and moves material well downstream of Longview, increasing deposition in areas outside the navigation channel.

The Cowlitz River flows remain along the Washington shore, increasing deposition potential along this shoreline. Recent surveys, however, show no major sediment build-up in this area.

Columbia River flows at Longview are normally high during the winter, producing greater flushing capability and can transport at least part of the Mount St. Helens sediment load to the estuary.

Question. Do you have sufficient funds in the fiscal year 1983 operation and maintenance request for the Columbia River project to maintain the Columbia River channel to project dimensions?

Answer. As I indicated previously, by the end of fiscal year 1983, sediments entering the Columbia River from the Cowlitz would total 15 million cubic yards, with 8 million cubic yards required to be removed from the main Columbia River channel. Our fiscal year 1983 operation and maintenance program will provide for the removal of only 3.5 million cubic yards of the expected infill.

Question. What is your fiscal year 1983 capability for the Columbia and lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg., projects?

Answer. The fiscal year 1983 capability is $20.1 million. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects. This will provide for removal of an additional 4.5 million cubic yards of infill from the main navigation channel.

Question. What is the impact if no further dredging is accomplished in the Toutle and Cowlitz Rivers in fiscal year 1982 and fiscal year 1983?

Answer. As previously stated, a no dredging program in the Toutle and Cowlitz Rivers would reduce the flood protection to the Cowlitz River area from a 500-year frequency to around 100 years by the end of fiscal year 1983. A dredging program in the two river areas would preserve the high level of protection provided by our prior emergency work programs.

Question. How much emergency funds would be required in fiscal year 1983 to provide 500-year protection to the Cowlitz area?

Answer. The total estimated cost for work on the Toutle and Cowlitz Rivers to maintain the 500-year protection to the Cowlitz area is $27.5 million. This would include $4 million for revetment and dredging work on the Cowlitz, $18.7 million for excavation of LT-1 and LT-3, sediment stabilization basins in the Toutle, $1 million to remove the debris-retaining structure on the South Fork Toutle River, and $3.8 million for associated government costs. This work would also require an additional $1 million for monitoring activities on the Toutle and Cowlitz Rivers. The result of such excavation and dredging work in the Toutle and Cowlitz would mean significant sediment reduction in the Columbia River. The dredging work in the Columbia River main channel could be reduced from 8 million cubic yards to 2.5 million cubic yards for a net saving of some $8.75 million in the operation and maintenance program.

Question. As I understand, funds are included in the section 216 budget request for the Cowlitz River basin, Washington, study. Could you describe the purpose and scope of this study?

Answer. Initial funding of $250,000 would permit us in the first year to define specific problems and problem areas; to identify potential solutions and needed modifications to existing improvements; to seek and identify cooperating non-Federal entities; and to develop a plan of study. Ultimately, we would formulate and evaluate plans to provide long-term solutions to the bank erosion, flooding, and navigation problems caused or aggravated by the eruption of Mount St. Helens.

Question. What is your fiscal year 1983 requirement for this study if you expand your effort beyond a reconnaissance scope of work?

Answer. We have a fiscal year 1983 capability of $500,000. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

McNary Lock and Dam, Second Powerhouse, Oregon and Washington

Question. The fiscal year 1983 budget request includes $1.8 million for continuation of planning and engineering studies. What will you accomplish with these funds?

Answer. The fiscal year 1983 budget request would include funds to essentially complete preconstruction planning.

Question. What is your fiscal year 1983 capability? If these funds are provided, when would this project be ready for construction?

Answer. We have a fiscal year 1983 capability of $2 million. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects. With these funds we could complete all preconstruction planning. If project authorization is received, this project would be ready for a construction start in fiscal year 1984.

Question. If this project is authorized and is funded for construction in fiscal year 1984, what would be the power-on-line date?

Answer. If this project is authorized and funds provided in fiscal year 1984 for construction, the power-on-line date for the first unit is August 1989.

Question. What contributions would this project make in meeting the Northwest regional power loads? In this regard, what is the region's power outlook for the next 10 years?

Answer. Each of the McNary second powerhouse units will have a generating capacity of 123.67 megawatts for a total added capacity of 742 megawatts. The energy deficits in the next 10 years range from 1,279 megawatts to 3,000 megawatts, while the capacity deficits in this period range from zero to 3,797 megawatts.

Columbia River Federal Hydropower System

Question. How much generation did the Columbia River Federal hydropower system produce last year? Relate this generation to the amount of oil that would have been required to produce the equivalent amount of energy. What was the Corps' share?

Answer. Last year, plants in the Columbia River Federal hydropower system produced 119 billion kilowatt-hours of pollution-free energy. An equivalent amount of energy produced by oil-fired thermal powerplants would have consumed almost 200 million barrels of oil which, if imported, would cost $7.3 billion. The oil savings is equivalent to about 12 percent of our Nation's foreign oil imports last year. The North Pacific Division operates 21 hydroelectric projects in the Columbia north Pacific region with an installed capacity of 12,086,500 kilowatts. Last year these projects produced 38 percent of the total electric energy in the region.

McNARY SECOND POWERHOUSE

Question. It appears that these Columbia River system projects have been wise investments by the Federal Government. Could you relate the annual worth of generation from one of your projects versus the cost of the construction of that project? Could you use the original Bonneville project as the example?

Answer. The original Bonneville project produces more than 6 billion kilowatt-hours of electric energy annually. Cost of an equivalent amount of generation, using an oil-fired generating plant, would be $420 million annually. This is compared to the $83.2 million total cost of construction of the original Bonneville project.

POWER RATES

Question. The Bonneville Power Administration recently announced a significant cost increase in the power rates. How do the new rates compare with the cost of generation by the Corps hydropower system?

Answer. I understand that the Bonneville Power Administration is currently reviewing rates for the period October 1 to September 30, 1983, and project a new wholesale rate for firm power of about 21 mills per kilowatt-hour. By comparison, the fiscal year 1981 average cost of generation by the Corps hydropower system was 2.31 mills per kilowatt-hour.

BONNEVILLE NAVIGATION LOCK, OREGON AND WASHINGTON

Question. Congress appropriated $3.4 million for this study in fiscal year 1982. Your fiscal year 1983 budget request of $1,662,000 is a significant reduction in the level of funding for this study. What is the reason for the reduction?

Answer. The reduction was made to the fiscal year 1983 funding level because of budgetary constraints.

Question. What is your fiscal year 1983 capability? If capability funds are provided, what improvements would you make in your schedule?

Answer. We have a fiscal year 1983 capability of $3.5 million. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects. If these funds are provided, we could advance the completion of preconstruction planning by 1 year from September 1985 to September 1984.

Question. What is the urgency for this project? What benefits would be derived from this project?

Answer. The existing small lock is projected to reach capacity in 1988. This suggests proceeding as rapidly as possible with design and construction of a new lock. Principal benefits to be derived are avoiding long and costly delays at the lock; savings in switchboat costs; incremental transportation savings; and recreation craft benefits.

Question. Would you discuss the navigation problems of the present lock and expected improvement to be realized from the navigation lock?

Answer. The present navigation problems at Bonneville lock are of two kinds: Delays prior to and during lockage and damages and accidents. These problems arise because of the restricted size of the lock chamber, the hazardous entrance approaches, and the naturally constricted channel of the Columbia River in this general vicinity. Waterborne commerce on the Columbia Snake Waterway is expected to equal or exceed the capability of the Bonneville lock by the year 1988. The upstream locks have sufficient capacity to handle anticipated traffic beyond the year 2040. Therefore, Bonneville lock will become a bottleneck to water traffic on the Columbia River in the late 1980's. The project, as proposed, would eliminate the hazardous approaches to the existing lock. It would also reduce shipping costs by eliminating delays in lockage.

Question. What was the 1981 traffic on the existing lock?

Answer. During calendar year 1981, 9,700,000 tons of traffic passed through the Bonneville lock.

Question. When will waterborne commerce on the lock equal or exceed the capacity of the present lock?

Answer. We project lock capacity to be reached in 1988.

Question. If authority and funds are provided, when could you complete the construction of the lock?

Answer. If we receive authority for project construction and also receive adequate funding, we could complete construction by fiscal year 1989.

ELK CREEK LAKE, OREG.

Question. Congress appropriated $1.3 million for the Elk Creek project in fiscal year 1982 for the continuation of design. Would you discuss your current year engineering program?

Answer. We expect to complete the majority of the design effort on the main dam structure by the end of fiscal year 1982. This work will include design revisions to the embankment and spillway which reflect the present state of the art and an intake tower which has provisions for hydropower.

Question. When will this project be ready for the resumption of construction activities?

Answer. If funds are provided, we could resume construction in fiscal year 1983.

Question. What funds would you need in fiscal year 1983 to finance this resumption of work?

Answer. In accordance with the administration's current philosophy and policy, the Elk Creek project is currently under review. Once the review is complete, a determination with respect to the fiscal year 1983 capability will be made.

ROGUE RIVER FLOOD DAMAGES

Question. The Rogue River area again suffered significant damages from flooding during this winter season. Would you describe the contribution made by the completed Lost Creek and Applegate projects? How much flood damage was prevented?

Answer. During the December 19–21, 1981, rainstorm, flood control regulations at these two projects made significant contributions to the reduction of river stages. Below the Applegate Lake project the river stage was reduced from 13.9 feet to 10.2 feet, or a 3.7-foot reduction. Because of this river regulation, some $2.82 million in damages was prevented. Likewise, as the result of the Lost Creek Lake project operations, the river stage below Lost Creek was reduced from 11.7 feet to 9.5 feet, or a 2.2-foot reduction. This stage reduction prevented $2.48 million in damages in the Rogue River area.

Question. If the Elk Creek project had been constructed, what flood reduction contribution would this project have made? How much additional damage could have been prevented by this project?

Answer. The Elk Creek project would have made further contributions to the reduction of high-water conditions resulting from the December 19–21, 1981, rain storms. With Elk Creek at the three control points on the Rogue River, the observed stage of 9.5 feet at Dodge Bridge would have been reduced to 8.1 feet; at Raygold, the observed stage of 15.5 feet would have been reduced to 14.6, and at Grants Pass, the stage of 23.0 feet lowered to 22.3 feet. These reductions would have prevented an additional $1.8 million in damages.

CHETCO RIVER, OREG.

Question. What is the status of the preconstruction planning work on the Chetco River project, Oregon?

Answer. Fiscal year 1982 funds will be used to initiate and complete the general design memorandum in September 1982. Our preconstruction planning work will also include a rock probing contract in connection with the channel deepening.

Question. If funds are provided in fiscal year 1983, when could you award the construction contract and when could you complete the project?

Answer. We could award the construction contract for the two jetty extensions in May 1983 with the overall completion in September 1984.

Question. What would be your first-year construction requirements?

Answer. First-year construction funding requirements will not be addressed until a determination has been made regarding upfront financing or local cost sharing for this project.

STUDIES OF THE COLUMBIA RIVER AT THE MOUTH, OREGON AND WASHINGTON

Question. What work is programed for fiscal year 1983?

Answer. We plan to complete the feasibility report and submit it to the Chief of Engineers in fiscal year 1983.

Question. What work is programed with initial funding received in fiscal year 1982 on the Columbia River coal export channel study? Describe work programed for fiscal year 1983.

Answer. In fiscal year 1982, we will begin hydraulic model testings and initiate required engineering and economic studies. We also will perform subsurface investigations. In fiscal year 1983 we will complete model tests, conduct environmental studies, and complete the reconnaissance report.

Question. Do you have additional capability in fiscal year 1983 for the Columbia River coal export study? If so, what would it accomplish?

Answer. Our additional capability is $165,000. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects. This would advance completion of environmental and fish and wildlife investigations by 6 months.

COLUMBIA RIVER AND TRIBUTARIES STUDY

Question. Do you have any additional study capability in fiscal year 1983 to undertake detailed feasibility studies of potential storage projects in the Columbia River basin?

Answer. The additional capability is $100,000 for feasibility studies of potential storage projects. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

Question. Do you have any additional capability to investigate run-of-river hydropower development potential in fiscal year 1983?

Answer. The additional capability is $60,000 for investigation of run-of-river hydropower sites. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

Question. What is your capability in fiscal year 1983 to undertake studies on the Hanford navigation canal?

Answer. The capability for the Hanford Canal study is $200,000. Please note the reservations, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

SIUSLAW RIVER, OREG.

Question. Could you bring me up to date on your preconstruction planning efforts on the Siuslaw River project?

Answer. We will complete all preconstruction planning in fiscal year 1982.

Question. What is the urgency for this project?

Answer. Under existing conditions, the entrance channel shoaling is created by a combination of sands carried downstream by the river and washed in by ocean currents. The shoaling reduces entrance depths and causes ocean waves to break at the entrance, creating an extremely hazardous condition. Improvement of entrance conditions would reduce transportation costs, reduce annual channel dredging costs, reduce damage to equipment, and increase use and safety for charter boat operators and recreation boaters.

Question. If funds are provided in fiscal year 1983, what would be your schedule?

Answer. The fiscal year 1983 capability for this project is currently under review pending determination of upfront financing by local interests; therefore, no construction schedule is available at this time.

BONNEVILLE POWER UNITS

Question. What is the status of the Bonneville power unit project?

Answer. Preconstruction planning has been completed and the project is ready for initiation of construction.

Question. What is your fiscal year 1983 capability?

Answer. The fiscal year 1983 capability is under review pending determination of upfront financing by local interests.

Question. If upfront financing by local interests is not provided, what are the first-year funding needs to initiate construction under Federal financing?

Answer. Due to the impacts of outyear funding, we do not have the capability to initiate construction in the absence of upfront financing by local interests.

MOUTH OF THE COLUMBIA RIVER DREDGING

Question. As I understand, a contract dredge, the *Eagle I*, was used in fiscal year 1981 to assist the Corps dredge *Biddle* in the maintenance dredging of the Columbia River at the mouth channel. What is the general condition of the channel today?

Answer. The accomplishment of supplemental work by the *Eagle I* resulted in an improvement of conditions of the Columbia River bar. The channel currently is in much better condition than in prior years.

Question. How successful was the *Eagle I* in the dredging work? What was the unit cost of dredging with the *Eagle I* and how did these costs compare with the *Biddle's*?

Answer. Except for repair problems, the *Eagle I* satisfactorily accomplished over 2 million cubic yards of channel maintenance on the mouth of the Columbia River in fiscal year 1981. Approximate unit cost for *Eagle I* dredging was $1.07 per cubic yard. The approximate unit cost for the Government's dredge *Biddle* was $0.85 per cubic yard, with the *Biddle* working a more difficult portion of the project.

Question. The Corps has testified on previous occasions that, generally on a 3-year cycle, hopper dredging support is required to suplement the *Biddle's* efforts on the bar. Will the *Biddle* need help in fiscal year 1983?

Answer. We anticipate that under normal conditions, assistance will be required in fiscal year 1984 to restore adequate dimensions at the mouth of the Columbia River. Several factors could require adjustments in the schedule, such as excessive winter storms, unusual Columbia River freshets, or an unusually bad weather working season.

Question. If a deeper channel is eventually realized as a result of your ongoing Columbia River at the mouth study, will you need additional hopper dredging plant to help with dredging requirements or would a new, modern dredge with significantly higher production capability be better suited?

Answer. Yes, sir; additional dredging plant with higher production capability will be required. This new, high-production dredge would be best suited for the maintenance of a deeper channel.

NEW WEST COAST MEDIUM-CLASS HOPPER DREDGE

Question. Would you bring me up to date on the status of the proposed new west coast medium dredge?

Answer. Funds are included in the plant replacement and improvement program for the current fiscal year to initiate the design of the new west coast medium-class hopper dredge. The Marine Engineering Board, in its meeting in November 1981, approved a start of design by the Marine Design Center in Philadelphia. Basic data for the start of design has been submitted by the Portland district. Design is expected to be initiated in March 1982.

POWERHOUSE REPAIR AND MODERNIZATION PROGRAM IN THE PACIFIC NORTHWEST

Question. The fiscal year 1983 O. & M. budget request includes funds for powerhouse repair work at Bonneville, John Day, and the McNary projects. Would you discuss the problems of the Columbia River hydropower plants?

Answer. As Northwest power usage has increased, thermal powerplants have been, and are being, constructed to accommodate base loads. Because of the comparative ease in which hydropower can be started and stopped, it is being used increasingly to satisfy peak load demands. Increased hydroplant cycling under peaking conditions places significantly increased stress on components such as circuit breakers, turbine impellers, coils, and windings. Upgrading or modernizing old equipment to eliminate known weakness in the power operation system such as turbines/generators and supporting electrical/mechanical systems is necessary to prevent a decline in generating unit availability and to extend the useful service life of equipment in the powerhouse. At McNary, for example, equipment such as voltage regulators for units 13 and 14, hydraulic systems, and load control systems are old, dating from 1957. Maintenance requirements are high, parts are no longer in supply, and require expensive custom fabrication. John Day lock and dam is another example. Although it is a comparatively modern plant with the last unit on line in 1971, operational problems have developed because of the severe peaking performance requirements. Unit failure trends have developed both in turbine and generator components so that in-service availability has declined from 92 percent to 84 percent in 1981.

Question. What is the overall objective of this program?

Answer. Our overall objective is to maintain our hydroelectric projects at a high level of availability to help satisfy the Northwest power needs. Hydropower generates 83 percent of all power consumed in the Northwest. In 1980, 51 percent of that hydropower was provided by the Corps. Loss of a single large unit impacts power system stability, may cause deficiency in generation, and results in severe power swings throughout the interconnected Northwest power pool system. Extended major powerplant failures during periods of extreme cold and high power demand can cause major economic and social disruptions in the region.

Question. You mention the need to increase the availability rate. What is your current rate and the relationship of this rate to the Northwest regional power needs?

Answer. Sir, our availability rate for 1981 was 91.9 percent. The desired level of performance for Northwest regional power needs is a rate of at least 95 percent.

Question. As I understand, this comprehensive repair and modernization program will take a number of years to accomplish. Would you provide for the record the funding schedule for each project program and identify the additional capabilities requested for fiscal year 1983?

Answer. Yes, sir.

[The information follows:]

SCHEDULE OF COSTS

[In thousands of dollars]

Fiscal year	Bonneville I	John Day	McNary	Total
1982	1,080	1,710	3,800	6,590
1983	[1] 2,151	[2] 4,867	[3] 6,257	13,275
1984	1,966	7,785	3,280	13,031
1985	550	5,383	508	6,441
1986		3,837	154	3,991
1987		3,503		
1988		2,303		
1989		1,993		
1990		1,743		
1991		161		
Total	5,747	33,285	13,999	

[1] Budget request includes $770,000; additional capability $1,381,000.

[2] Budget request includes $2,875,000; additional capability $1,992,000.

[3] Budget request includes $4,000,000; additional capability $2,257,000.

NOTE.—Please note the reservation, however, regarding capabilities given in response to the request for a list of our fiscal year 1983 capabilities for all projects.

Question. Would you give me a specific example of modernization work that would both extend powerplant life and increase production.

Answer. The rewind of generator stators at the John Day project is an excellent example of modernization work. Our design at John Day was the state of the art in the 1960's. However, the generator stator windings have required an inordinate amount of repairs due to the heavy peaking load operation. This has resulted in burned slot filler material and broken small pieces of stator-iron lamination plates being found in the units. The availability rate for John Day has begun to drop off sharply, primarily due to the stator winding failures. It is estimated that completing the repair program will raise the John Day availability rate to meet the industry average of 95 percent. The proposed program will renew the life of the equipment which is nearing the end of its present design life, effectively recertifying the powerhouse. This program is expected to increase powerhouse generating efficiency by about 2 percent, primarily due to the governor modernization. Based on John Day's annual production of 10 million megawatt-hours, this equates to an increase of 200,000 megawatt-hours per year with no increase in water requirements—worth $17 million in oil-equivalent dollars annually.

SUBCOMMITTEE RECESS

Senator BURDICK. Thank you all. And the meeting will recess. The next meeting of the subcommittee will be on Tuesday, March 16, at 2 p.m. in room 1318, Dirksen Building, to review the Bureau of Reclamation water budget.

[Whereupon, at 11:35 a.m. Friday, March 12, the subcommittee was recessed, to reconvene at 2 p.m. Tuesday, March 16.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

TUESDAY, MARCH 16, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS
Washington, D.C.

The subcommittee met at 2:05 p.m. in room 1318, Everett McKinley Dirksen Senate Office Building, Hon. Quentin N. Burdick presiding.

Present: Senators Hatfield, McClure, Abdnor, Mattingly, and Burdick.

DEPARTMENT OF THE INTERIOR

STATEMENT OF JAMES G. WATT, SECRETARY OF THE INTERIOR

ACCOMPANIED BY:

GARREY E. CARRUTHERS, ASSISTANT SECRETARY, LAND AND WATER RESOURCES
JOSEPH W. GORRELL, DIRECTOR OF BUDGET
R. N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION
EUGENE HINDS, ASSISTANT COMMISSIONER, PLANNING AND OPERATIONS
W. C. KLOSTERMEYER, ASSISTANT COMMISSIONER, ADMINISTRATION

INTRODUCTION OF WITNESSES

Senator BURDICK. The hearing will come to order

This afternoon we will receive testimony on the fiscal year 1983 budget request for the Bureau of Reclamation and related activities of the Department of the Interior.

Our principal witness is James G. Watt, Secretary of Interior. I extend a special welcome to you on your first appearance here since becoming Secretary. I believe your last appearance was during your tenure as Vice Chairman of the Federal Power Commission.

We look forward to your testimony today. We also welcome Garrey Carruthers, Assistant Secretary of Land and Water Resources; and Mr. R. N. Broadbent, Commissioner of the Bureau of Reclamation.

Mr. Secretary, please introduce your other colleagues for the record, and then proceed with your testimony.

Secretary WATT. Thank you, I appreciate the chance to appear before this committee. It has been a special committee and you and I have been able to work on a lot of projects for many years dating back to 1969, 1970, and 1971, when I was Deputy Assistant Secretary for Water and Power Development. It is nice to continue on with these efforts to build the needed water resources projects in America.

With me today is the Commissioner of the Bureau of Reclamation, Mr. R. N. Broadbent; the Assistant Secretary of Land and Water Resources, Garrey Carruthers; the Director of the Office of Budget, Joe Gorrell.

PREPARED STATEMENT

Senator Burdick, I have a formal statement I would like to submit for the record.

It is similar to the statement I presented to you and your colleagues in the other committee, but let me focus on the Bureau of Reclamation activities.

Senator BURDICK. It is received and, with no objection, made part of the record.

[The statement follows:]

STATEMENT OF JAMES G. WATT

Mr. Chairman and Members of the Subcommittee, it is a privilege and pleasure to testify before you today in support of the budget request for the Bureau of Reclamation. The Reagan Administration is committed to a bold, positive program for water development. In 1981, major initiatives were begun which will permit more projects to be built. We are preparing new standards and practices for the financing of projects. States and users will be asked to pay their fair share. At the same time, we have reversed a Solicitor's opinion which was unfair to the Western States. Federal water rights have been clarified, and a fundamental power has been returned to the States. Water policy is no longer deferred to low level, regional organizations. The Interior Department and the Corps of Engineers are working to develop new initiatives compatible with the goals and policies of the States.

The 1983 budget represents a continuation of these directions in water policy. Water projects will be completed. There will be planning for new starts. Years of neglect for our water resources are over.

The 1983 budget request for the Bureau is $950.3 million, an increase of $179.1 million over the 1982 estimates. The largest portion of the increase, $118.1 million, is in construction where work will continue on 70 projects and preconstruction planning will continue on two projects.

Past policies on financing major water projects generally dictated that the Federal government would pay all costs of construction and, where applicable, repayment by project beneficiaries was extended over many years with little or no interest. Though some proposed projects are very much needed, and the benefits exceed their costs, the economic conditions of this country no longer allow for this type of financing. Accordingly, in the very near future, the Cabinet Council on Natural Resources and the Environment will propose for the President's approval policies which will require that future water projects be cost-shared by the States or project beneficiaries and the Federal government.

We have discussed this proposal with a number of State and other officials and, contrary to what you might anticipate, there has been a very positive response. In fact, some States and user organization representatives have already initiated plans to provide some construction financing for desired projects. Because State and water user funds will help finance construction, only the most needed projects will be selected for construction.

Along this line, I am very pleased to be able to tell you that the FY 1983 budget anticipates construction new starts by the Bureau of Reclamation. After consultation with local sponsors, appropriations will be requested for construction new starts that meet the Administration's criteria for non-Federal financing and cost-sharing and which are economically and environmentally sound.

To further streamline the project planning process, we will propose legislation which, if enacted, will significantly reduce the amount of time it takes from developing the concept of a proposed project to initiating its construction. The current planning process takes about 17 years before the Bureau of Reclamation can start construction on approved projects. Much time is lost in both the investigations themselves and in seeking and receiving authorizations and appropriations. This process can be greatly streamlined if the Department is permitted to proceed with studies deemed by the Secretary to be necessary and appropriate, subject only to appropriation of funds. We anticipate the 17-year lead time prior to construction can be reduced to about 7 years with passage of this legislation.

As part of this effort, we have included, for the first time, funds in the General Investigations Program for advance planning for construction. This $2 million request will permit completion of preauthorization activities prior to

Congressional authorization for construction. The total request for General Investigations is $36.5 million which is $5.9 million more than 1982. This includes funds for 13 new plan formulation starts and advanced planning funds for 11 projects.

As evidence of our intentions to move forward in water resources development, and in light of a recent court decision, we are proceeding with construction of the Garrison Diversion Unit. I also have announced my proposed water allocations for the Central Arizona Project and intend to make final decisions in late March or early April.

The $140.8 million request for Operation and Maintenance will allow for work deferred in prior years to be reinstated and O&M work will continue on 32 projects. As part of the effort to increase the Nation's energy supplies, the O&M program also serves to uprate powerplant facilities, where feasible, in order to increase generating capacity at existing units. Uprating programs completed in FY 1983 will increase installed capacity by about 133 megawatts.

We have requested $39.6 million for the Loan Program which is $17 million higher than 1982. This funding level will keep all 10 ongoing projects on schedule.

We are also requesting $49.3 million for General Administrative Expenses and $1 million for the Emergency Fund.

I am committed to the President's economic program and the need for significant changes in administering the Nation's water resource programs. Today I would like to briefly summarize the changes which have taken place in the past year and describe our plans for continuing the progress we have made.

The value of and demand for water is increasing rapidly throughout the United States. Compounding these problems are the growing and competing demands for water, particularly in the West, with the greatest use coming from agriculture, mining and energy industries.

These problems have long been known or foreseen; however, the regional organizations established to resolve water supply problems have been largely ineffective in developing and implementing water policy. Water is one of our country's most important commodities and we cannot wait any longer to establish sound water policies and manage our programs so as to enhance, properly utilize, and conserve our precious supplies.

As a first step, the President directed his Cabinet Council on Natural Resources and the Environment to review the Water Resources Council's principles and standards and propose changes to remove burdensome and unnecessary requirements so that much needed water resources plans and projects may be brought to fruition. The present plan calls for repeal of the principles and standards and reissuance of those appropriate or modified sections as guidelines, rather than as regulations, for formulation, evaluation, and selection of water and related land resources plans and projects.

This Administration is convinced that State/Federal cooperation and due respect for State water rights are the keys to a successful water policy. We have established a small Office of Water Policy in the Office of the Secretary which will function as a focal point for Interior-related water issues proceeding from the premise that the States have primary rights in water allocation, planning and management. We have returned to the States primary authority to allocate water resources. In reversing a 1979 legal opinion on so-called "nonreserved" federal water rights, we reaffirmed that, unless otherwise directed by Congress, the individual States shall govern how Interior agencies acquire new water sources.

Revised policies and procedures to shorten the planning lead time and requirements for cost-sharing to finance construction relate only to the front-end considerations of new water and power projects. We must also revise the way we manage our resources after the projects are built. The rates paid for our valuable water are too low and irrigation acreage limitations do not reflect the nature of farming and farm ownership.

This Administration supports legislation changing the 1902 Reclamation Act which would increase the allowable size of farms eligible for Federal irrigation water from 160 to 960 acres, the elimination of limitations on the leasing of additional land to receive water, and the elimination of residency requirements on farm ownership.

Currently, the rates paid for water do not reflect the cost of supplying it and do nothing to promote its conservation. Rate schedules should be revised to allow, to the maximum extent possible, the full recovery of costs to provide the water. Rates paid for the first 960 acres of agricultural water should be based on the ability of the farmer to pay, with higher rates for water to irrigate lands in excess of 960 acres. Municipal and industrial water rates should also be increased to recover the cost of supplying the water. Such changes in water rates will promote water conservation, which will help alleviate the most important water problem facing this country - the quantity of water available.

During the past year, the President abolished six river basin commissions which have been utilizing the time and other resources of their members but producing few if any results. In addition, the President is proposing that Federal representation on the Delaware and Susquehanna River Basin Commissions be consolidated to have one Federal member and one alternate for representation on both panels. In addition to some budget savings, we feel representation and activities resulting from the consolidation will be more efficient and effective.

Last year we determined that the mission and objectives of the Water Resources Council should be evaluated, and recommendations on this organization should be submitted to Congress. We subsequently proposed and continue to believe that the Water Resources Council is no longer effective in activities to develop the Nation's water resources. Accordingly, no funding is being requested for the Water Resources Council and we are again proposing that it be abolished.

As you know, the President has proposed the reorganization of energy functions. The Interior portion of the President's budget includes funds for programs the President is proposing to transfer from the Department of Energy. These programs include the Power Marketing Administrations which come under the purview of this Subcommittee. It would be our intention when the reorganization legislation is enacted, and the transfers made, to continue all of the Power Marketing Administrations as presently configured. Our proposed legislation will be written to assure separate bureau status for the five Administrations. The budgets for these programs, however, were developed by the Energy Department and their leadership has testified on them.

Mr. Chairman, this concludes my prepared remarks. I do, however, enlist your continuing support in making this year as successful as the previous year has been in carrying out our mutual objectives for this Nation. I will be pleased to respond to any questions you may have.

WATER DEVELOPMENT PROGRAM

The Reagan administration is committed to a bold, positive program for water development. We have made some significant strides this past calendar year that have been well received by all of the States without exception. The changes have put States back in control of the water on the Federal and State lands as it was for 100 years up until the last administration. Fortunately, we have brought that back into line as it should be with good public policy.

We have made another change I am sure all the members here appreciate. We have adopted again the proper name for the chief construction agency for western water projects, and that is the Bureau of Reclamation. I have a hard time remembering the name we changed it from. It is just as well we forget that other name forever, as far as I am concerned.

FISCAL YEAR 1983 BUDGET REQUEST

The 1983 budget submission to the Congress is a recommendation calling for a 23-percent increase over the 1982 program. The request for the Bureau is $950.3 million, an increase of $179.1 million over the 1982 budget. The largest portion of the increase, $118 million, is for construction where work will continue on 70 projects.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Senator Burdick, one of the personal and special interests that you have in ongoing construction projects deals with the Garrison Diversion Unit. I would like to focus on that. In our budget we have asked for $4 million to continue construction work at Garrison. Had we had the benefit of the most recent court decision at the time we were formulating the priorities for the Bureau of Reclamation, we would have requested $14 million for the Garrison diversion unit.

We would be pleased if Congress would increase the appropriations for this year's budget request to an amount equal to $14 million. We don't need that extra $10 million in addition to the Bureau of Reclamation's request, rather we would reallocate some moneys within our request. We will work with your staff on some language that would allow that to happen easily. We could take it out of the underfinancing. This would allow us to proceed on that project as I know you would like it to be done.

COST SHARING AND PRINCIPLES AND GUIDELINES

We will be dealing with policies on cost sharing and principles and standards within the next several weeks. The Reagan administration will be announcing those policies for the benefit of review by this committee as well as all of Congress. These will allow us to initiate one or more new construction starts for multipurpose reclamation projects in the Western States. We plan to come back to the committee once we have identified new starts that comply with the policies of our principles and guidelines and cost sharing. We have reviewed this in principle with several State leaders and will continue to meet with Western

Governors on this issue. They are very supportive of our efforts to bring about more cost sharing than we have had in the past.

PROGRAM FOR WATER RESOURCES PROJECTS

So Mr. Chairman, what I am really submitting to you is an upbeat program for water resources projects in the Western States. This requires an increased budget, with an aggressive program, pursuing the new starts contemplated, cost sharing, O. & M. increases, and other things up. We feel, as this committee has felt in the past years, that if America is to be prepared to meet the needs of the consumers—that is, municipal and industrial users, agricultural interests, and the power needs—we must build additional storage capacity and delivery capabilities not only in the Western States, but across the Nation. We are trying to prepare for that day. In order to accelerate good programs, at least for 1983, we are asking Congress to appropriate funds to allow us to aggressively pursue the programs underway and get the new starts underway.

Senator Burdick, I think that is the basic statement. Senator McClure has come in.

Senator McClure, I am putting forth basically the same statement that I submitted to your committee a week or so ago, and calling for increases of over 20 percent for the Bureau of Reclamation which we talked about.

Senator BURDICK. Thank you very much, Mr. Secretary.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Going back to Garrison, you have indicated the additional $10 million will be provided out of total Bureau funds so Congress will not have to go beyond the present package.

Secretary WATT. Yes.

Senator BURDICK. Will congressional action of any kind be required to transfer these funds?

Mr. BROADBENT. I think we would ask that you increase underfinancing in the construction program by $10 million, and designate that additional $10 million for the Garrison diversion unit in the committee report.

Secretary WATT. You would decrease the underfinancing?

Mr. BROADBENT. No; increase the underfinancing and then add $10 million to the budget for the Garrison diversion unit.

Senator BURDICK. We would have to add $10 million for this specific project?

Mr. BROADBENT. Yes; and then increase the underfinancing which is the amount we subtract from the total construction budget, increase it by $10 million. Then on a priority basis over the next few months we would decide where to best apply the underfinancing for the entire construction program.

Senator BURDICK. Do I understand, we increase——

Secretary WATT. If we increase the underfinancing by $10 million, we can make allowances to increase the construction money that is needed to help the Garrison project be constructed at the rate of $14 million during fiscal year 1983.

Senator BURDICK. My question still is, Must I include language in the bill to indicate that?

Secretary WATT. The answer is "No," but the committee report should reflect the additional $10 million.

Senator BURDICK. Thank you.

Could you be specific? Do you have plans for using that extra $10 million ready to go?

Mr. BROADBENT. We know specifically where we would spend that $10 million and would be happy to furnish that information to you for the record.

Senator BURDICK. That would be most helpful.

[The information follows:]

FUNDING FOR GARRISON DIVERSION UNIT

The sum of $4 million has been requested for the Bureau's fiscal year 1983 program. These funds will provide for maintenance and site security of the Snake Creek pumping plant facility, continued construction on Oakes pumping plant and drainage system, and award of contract for construction of the drainage system in the Oakes test area. Also, funds will provide for continuation of preconstruction activities on other features of the unit.

An additional $10 million in fiscal year 1983 could be used for continuation of design on Lonetree Dam, Oakes distribution system, and reach 1A of the New Rockford Canal. Construction awards could be made on reach 1A of the New Rockford Canal, Lonetree Dam, and the Oakes distribution system. A construction award on reach 1B of the New Rockford Canal would be accelerated from August 1983 to October 1982. Funds would also be used to purchase fish and wildlife mitigation lands from willing sellers and to continue work on Oakes west side test area drains. Completion of these features is vital to getting Missouri water to the Oakes test area so that a monitoring program can be established as recommended by the International Joint Commission report. In conjunction with this additional funding, an additional staff of 21 would be required.

FEDERAL PARTICIPATION IN WATER RESOURCE PROJECTS

Senator BURDICK. Mr. Secretary, what is your concept of Federal participation in water resource projects?

Secretary WATT. Your question concerns Federal participation?

Senator BURDICK. Yes.

Secretary WATT. We feel there will need to be many new starts, more safety of dams work, and reconstruction of other facilities. We will be coming forward shortly with principles and guidelines with the cost-sharing formula that will outline a recommendation to the Congress. They should be here within the next several weeks.

NEW COST-SHARING PROPOSALS

Senator BURDICK. What specific authority allows you to negotiate these new innovative financing arrangements, particularly when Congress has carefully considered and authorized each project under different cost-sharing provisions?

Secretary WATT. The new proposals would just relate to new starts. The authorized projects would continue just as Congress has authorized them.

Senator BURDICK. Have any of the local sponsors for the projects under consideration agreed to the administration's criteria for local cost sharing and provided letters of intent to comply with the non-Federal financing requirements?

Secretary WATT. Our process is not that mature yet, Senator, so we have not come that far down the path. But in meetings we have had with several Governors—namely, Governors Lamm, Babbit, and Herschler, to name three—they have been very receptive and encouraged with this effort. We have had one situation in Wyoming on the Buffalo Bill Dam where the State is agreeing to share 50 percent of the cost of that project, even though we have not published our guidelines. I think Senator McClure's committee has held hearings on that project already.

Senator BURDICK. The Senator from the State of Idaho.

Senator MCCLURE. Thank you very much, Senator, for chairing the hearing. I appreciate your starting the hearing because I was unavoidably detained.

Did you have something else to say, Senator?

Senator BURDICK. Excuse me, but I have two more questions.

Senator MCCLURE. Go right ahead.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM

Senator BURDICK. We know the Bureau is very interested in augmenting water supplies in the Colorado River by cloud seeding. What are your plans for beginning this program? Will research include States like North Dakota, South Dakota, and Nebraska? What will be the effect on the Missouri River flow?

Secretary WATT. We have been looking at weather modification for a good number of years and we have committed about $100 million to that research effort thus far. In the 1983 budget we are not asking for funding to carry out the High Plains cooperative program.

COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

We are proposing to Congress that we continue with the weather modification program in the Colorado River basin. Our thought is that we would get 100-percent payment by the users. We are now negotiating with the power users on the Colorado River to increase the price charged for power by about 1 mill to pay for an 8-year demonstration program. We think the augmentation program is such that the payout would be between 7 to 1 and 10 to 1. It is a very promising program. It may be that we would want to bring that same concept to the Missouri River basin States if we could work out a satisfactory agreement with those States. We are aware of the downstream impacts on land, but would have to have the full support of those States as we do in the Colorado River basin.

Senator BURDICK. With major decreases in Federal water research budgets, especially NOAA and the Bureau, we in States with large weather modification programs, like Utah and North Dakota, believe much can be learned by having the Bureau involved. What is your outlook on shared cost research and do you have a shared interest in the States?

Secretary WATT. We feel after spending $100 million on this program, that we have learned a great deal. It has been very constructive, very beneficial, as your question points out. We think it is now time to shift the emphasis and responsibility for those programs to the States and beneficiaries. We would be glad to cooperate if they took the lead. But we don't feel it is really beneficial to continue research for the umpteenth year after $100 million has already gone into it. It is either good or bad, and we should make those decisions.

Senator BURDICK. Senator McClure.

Senator MCCLURE [presiding]. Again, Senator Burdick, I do thank you for starting the hearing this afternoon and agreeing to give me that assistance.

I have only a few questions that I wanted to ask at this time, which I will submit for the record. But I do want to ask about the Central Utah Project.

CENTRAL UTAH PROJECT

Mr. Broadbent, the budget request includes $89.9 million for the Central Utah Project, of which the bulk goes to the Bonneville unit. The Central Utah Project was on the last administration's hit list, one that was identified very early on as being a wasteful project, one in which the cost-benefit ratio were not appropriately stated.

If I recall the history of the project, a high percentage of the benefits go to Indian tribes, is that right?

Mr. BROADBENT. There is a benefit to several of the Indian tribes, but it only amounts to about 6 percent of the total project benefits. We are still negotiating with the Ute Indians regarding their share of benefits from the Central Utah Project, which result primarily from irrigation. Substantial benefits from the project accrue to the Greater Salt Lake City Metropolitan Area.

BENEFITS TO INDIAN TRIBES

Senator MCCLURE. Has there been any consideration of taking the Indian benefits, the benefits to Indian tribes, and having that funded through BIA rather than having them do it in this manner?

Mr. BROADBENT. We have had some discussion with the representatives of the Ute Indian Tribe concerning how to meet needs of the tribe through CUP facilities. They will be making a proposal to both us and to the Bureau of Indian Affairs. We don't have that proposal yet.

Senator MCCLURE. I might encourage you to take a careful look at that, because when we first discussed this, when I first became aware of some of the costly portions of it, in which the cost-benefit ratios were questionable and were devoted toward benefits for the Indian tribes and most of the members of the committee at that time understood it to be in that vein, and we imagined subjecting the reclamation program to a criticism because of the desire on the part of Congress to find out some way to benefit the economic conditions and living conditions of Indian tribes that don't have a strong resources base. It might be better to reflect that in the BIA budget than the Reclamation program.

Mr. BROADBENT. We would be pleased to look at that. We have an ongoing discussion with the Indians and we can submit a statement regarding this matter for the record.

Senator McCLURE. Thank you. I would appreciate that.

[The information follows:]

FUNDING FOR INDIAN BENEFITS

The facilities which provide services to Indians are an integral part of the Central Utah Project (CUP). Proposed CUP units will serve both Indians and non-Indians, in some cases on adjoining parcels of land. Even if costs were divisible, separation of the construction funding into two separate appropriations would be cumbersome at best—any difficulties experienced with coordination of the justification and execution phases of the program would be likely to result in project delays. The Bureau recommends that, in this instance, funding for Indian benefits continue to be included within its regular appropriation for construction rather than the budget for the Bureau of Indian Affairs.

SMALL HYDROPOWER PLANT DEVELOPMENT

Senator McCLURE. There are a number of projects that were identified in the past as possible small hydroplants. I understand you are trying to find private, non-Federal sponsors for some of those, is that right?

Secretary WATT. That is right.

Senator McCLURE. Even though they have been approved by this committee or this body of Congress?

Mr. BROADBENT. Some have been authorized, yes.

Senator McCLURE. In that instance, you are hopeful you can find non-Federal sponsors even though they have been authorized?

Mr. BROADBENT. That is right.

Secretary WATT. Senator, I would like to highlight the point that you made here, since we are talking about non-Federal interests, not just private interests.

Mr. BROADBENT. If I might, for instance, we have power interests from the States of Arizona, Nevada, and California who are interested in non-Federal development of additional power at Hoover Dam.

OTHER FEDERAL AGENCY PARTICIPATION

Senator McCLURE. Second, on page 3 of your statement, you make some reference to the nonreserved Federal rights issues. Are you speaking with respect to your own Department? Are you in a position to report anything that might be happening with respect to the other departments and agencies?

Secretary WATT. Yes, I am. The Department of Agriculture has agreed to track with that, and I understand the Department of Justice has come to that position as well. I don't have a determination where the Department of Defense will be, though that is not as critical. The critical thing was the Department of Agriculture, and they are tracking with us.

Senator McClure. I appreciate that, and we will supplement that with a statement from the Secretary of Agriculture, and I appreciate your comments today and your leadership in getting that policy directed in an appropriate manner.

Senator Mattingly.

FEDERAL WATER POLICY

Senator Mattingly. Mr. Secretary, on the first page of your statement you were talking about water, and you say, "The water policy is no longer deferred to low-level, regional organizations," and that "the Interior Department and the Corps of Engineers are working to develop new initiatives compatible with the goals and policies of the States."

Who has the final word in those policies?

Secretary Watt. It should be the State law that controls the beneficial use of water within the State. Unfortunately, for a brief period of time during the past administration, the Department of the Interior Solicitor's opinion said that water arising on the public lands was reserved for Federal use, and by a determination of the Secretary of the Interior or the Secretary of Agriculture. That violates 100 years of good water law that puts allocations under State control. There are court decisions built up in both Federal and local cases. We have put it back where it belongs and we will keep it there.

TRANSFERS FROM POWER MARKETING ACTIVITIES

Senator Mattingly. The needs or concerns of all the people of our country, the transfer of activities from the Department of Energy to your budget, I believe, is being proposed.

Secretary Watt. Excuse me?

Senator Mattingly. Part of the Department of Energy is going to be transferred to Interior.

Secretary Watt. Yes; it is proposed by the President. Some functions would come to the Department of the Interior, and we have added those figures on, but they are not in the figures that we are talking about today.

Senator Mattingly. The Western Power people?

Secretary Watt. I would hope so, if we are going to reorganize.

Senator Mattingly. Keep smiling. Thank you.

Secretary Watt. I think Senator McClure knows more about this subject than I do.

Senator Mattingly. That is all I have; thank you.

Senator McClure. Senator Abdnor.

SOUTH DAKOTA SALE OF MISSOURI RIVER WATER

Senator Abdnor. I am sorry, Mr. Secretary, I was late getting here, but I want you to know I admire your courage and your convictions.

Secretary Watt. Thank you.

Senator Abdnor. I am not saying I approve of everything coming out of your Office, but I appreciate the thrust of your efforts. I guess it takes somebody with convictions and courage, and in that connection, how is the water policy coming? There is this little bill called S. 1095 that I feel very strongly about. Are we deadlocked as we were a year ago, or are you a little more inclined to look at the bill more sympathetically?

Secretary WATT. Let me take advantage of your kind remarks to say that last Tuesday I met with Governor Ray of Iowa, who is greatly disturbed about my enthusiastic endorsement of your State's sale of water to the ETSI pipeline, and I was adamant in my support for South Dakota's position and told the people of Iowa through the Governor and the news coverage I had there. I spoke to 750 members of the Izaac Walton League and I told them I thought this is the way the States should manage their water issues. If they were genuinely concerned that upper basin States were, in fact, going to take too much water, they ought to develop an interstate compact to address these issues. I think that Governor Ray was responsive as the attorney general of the State of Missouri was, whom I visited with about the same subject matter this weekend.

I compliment the leadership of South Dakota on the ETSI water sale and I want to support it.

CABINET COUNCIL ON WATER RESOURCE POLICY

With regard to the Cabinet Council's concept of government for President Reagan, as introduced, it has been extremely effective this past year. We will be announcing, Senator Abdnor, within the next several weeks, the concept of principles and guidelines that we will want to pursue for consideration of the new starts for water resources projects and for cost sharing. We are satisfied that this is the appropriate way for accountability, and we think when you see that work product that you will be pleased too. My response to your specific question about S. 1095 is that we have endured for 1 year without really having a meeting of the old Water Resources Council. As I meet with Governors around the country, including Governor Ray last week, I find that everybody is pleased that we don't have a Water Resources Council in an active manner, and for the most part they are delighted the River Basin Commissions have been abolished.

We have a problem in the Pacific Northwest. But things are going so much better in the water resource development field these last 14 months than they have gone for many years that our support for asking zero funding for the Water Resources Council function is endorsed. I think that as the months unfold, Senator Abdnor, you will be so pleased with the progress that you will put your bill on the back burner.

Senator ABDNOR. We will be happy to look over the last 14 months in relation to what the water policy bill we are talking about compares. Maybe we will be hearing more about the assignment. I admit you have had a good first year. You have gotten us moving again in the water program. We have a large number of projects coming out of the committee in the immediate future, but nevertheless it is something to look forward to. I want to commend Secretary Carruthers for this, and I guess I horned in as much as any one member in the State.

Secretary WATT. Yes, you did.

GARRISON DIVERSION UNIT, NORTH DAKOTA

EXTENSION INTO SOUTH DAKOTA

Senator ABDNOR. While I am at it then, I think I should ask Mr. Broadbent to shore up some things. You indicated in other committees that you are ready to go on with the study of the Garrison unit. Would you, for the record, comment on that point about the study, the extension of the Garrison project into South Dakota?

Mr. BROADBENT. We are just completing an appraisal study of the Garrison extension on the James River in your State. That study is in a rough draft form and has been sent to the States for comment. It should be completed soon. We support a full feasibility study of the James River. We are not sure at this time whether we need further authorization for that study or for the full feasibility study. Certainly something in the report would help us as we go into that James River study. We will support that feasibility study.

Senator ABDNOR. We are going to have that study before any work goes on in the Garrison, would we not?

Mr. BROADBENT. Yes; the appraisal study is just about complete.

Senator ABDNOR. The impact; we can have that before Garrison gets moving too rapidly?

Secretary WATT. We can assure you that is the case. We are moving ahead with Garrison in view of that.

Mr. CARRUTHERS. We are doing nothing on Garrison that is not compatible with the work or the contribution to South Dakota, and no structures will move water for distribution into Canadian water. The work on Garrison will be contributory to extensions to South Dakota.

Senator ABDNOR. That is good; we want to know where South Dakota is when it is completed.

AUTHORIZATION FOR FEASIBILITY STUDIES

Now, the 1965 authorization for the Garrison diversion unit and accompanying H. Doc. 325 include the construction of facilities to serve approximately 56,000 acres of irrigation in South Dakota. Many of the features proposed for South Dakota in the Garrison authorization are currently under consideration as part of the Garrison extension study. It would appear that the portions of the project currently under consideration in South Dakota could be studied under the Garrison authorization. Doing so could accelerate the study effort and certainly lead to completion of the study before any anticipated impacts would occur in my State. Is that correct, and would the Bureau support this approach?

Mr. BROADBENT. It is probably true that authority now exists to restudy those 56,000 acres of the Garrison diversion unit—then the Missouri Souris unit—in South Dakota that were included in the Flood Control Act of 1944. We are asking our solicitor to look into that matter for us. However, it is our opinion that to study the full 80,000 to 100,000 acres in South Dakota that were proposed by Governor Janklow, further feasibility study authority, such as that in S. 1553, would be needed.

IMPACT ON SOUTH DAKOTA

Senator Abdnor. Also for the record, Assistant Secretary Carruthers in a letter dated February 24, 1982, has assured Governor Janklow that the studies on the extension of the Garrison unit into South Dakota can and will be accomplished prior to the time any projected impacts on my State would occur. Can you confirm that?

Mr. Broadbent. Yes; that is correct. We expect that it will be about 10 years before the Garrison diversion unit is constructed and operating to a level that will significantly alter the James River in South Dakota. If we are able to shift into feasibility studies this year on the South Dakota water delivery study, it would be completed in 1987.

CENDAK Feasibility Study

Senator Abdnor. Let me ask you this. I think the Department has indicated support for feasibility study of the proposed CENDAK project. Will the Bureau be undertaking that?

Mr. Broadbent. We would support it, and if the bill passes we would go into the full feasibility study; yes, sir.

Secretary Watt. Senator Abdnor, if I might take the liberty, we are asking for special legislative language to allow us to facilitate the process on investigations such as that. It will reduce the study process from what, up to now, has been an average of 17 years down to 7 years.

Mr. Broadbent. Yes; we should have that proposal in form to bring up here to the Hill in the very near future.

Senator Abdnor. Good enough.

In terms of the 1983 funding, what would be the capability, would you work cooperatively with my State to try to complete this?

Secretary Watt. On CENDAK?

Senator Abdnor. Yes; on CENDAK.

Mr. Broadbent. The State will be cooperating in the CENDAK study, but we are not aware of any of the States' capabilities. Our capability is $400,000, in addition to the $100,000 included in our fiscal year 1983 budget request.

Senator Abdnor. That would give us a pretty satisfactory——

Mr. Broadbent. That is the money to be appropriated in 1983. The study would take more than that in future years, but that is the money in 1983. Let us submit a full statement to you.

Senator Abdnor. If we could find some extra money, I know you would not object.

Secretary Watt. As long as it is within ceiling.

[The information follows:]

CENDAK Feasibility Study

The presently programed central South Dakota water (CENDAK) appraisal study will be shifted over to a feasibility study as soon as authorizing legislation is enacted. That feasibility study is estimated to cost a total of $3,250,000 and would be completed in 1987. If the feasibility study is authorized, our fiscal year 1983 additional capability would be $400,000. This is in addition to the $100,000 in our budget request.

NOAA WEATHER MODIFICATIONS PROJECTS

Senator ABDNOR. Turning to another subject, NOAA has been conducting a State cooperative program to evaluate weather modification projects in Utah and North Dakota for the past 3 years. The fiscal 1983 budget proposes to reduce that modification activity of NOAA, although State and Federal programs would continue.

Would it be more efficient to include it as a part of the Bureau's weather modification program? Would the Bureau have any interest in that?

Secretary WATT. Senator, the Bureau of Reclamation has been identified as the lead agency for precipitation enhancement, and OMB so designates that. We are not asking for any money for the High Plains cooperative program in 1983 for weather modification.

COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

We are carrying out a program in the Colorado River basin in an effort to augment that river's flow. If we can get an increase in the rates for power generated at the dams on the Colorado River, we feel by raising the price of that power by about 1 mil, we can generate enough money to pay 100 percent of the cost of the weather modification demonstration. The experimentation that has been carried out to date indicates the return on that would be between $7 and $10 per $1 spent. We will be back to Congress with a budget amendment before the year is over.

We think it ought to pay for itself, because we think that after spending $100 million in research, in both the High Plains area and the high mountain country area, that the technical success is there and we don't need to continuously be calling it research. I think we will all win. Maybe we would want to consider an independent program where the main stem Missouri River basin dams would pay for weather modification and enhance those values as well.

Senator MCCLURE. May I ask a question in that regard? Am I correct in the assumption although it would generate more money, if the assumptions are correct, that money would flow back through power revenues that are project specific, to the repayment of the Federal investment on individual power projects, and by that drop back to the——

Secretary WATT. The answer is "Yes." That is why we need to come back to the Hill and get authority to make a special use charge on power sales for weather modification.

Mr. BROADBENT. We believe that weather modification in the Colorado River basin could generate 1.6 million acre-feet of new water every year after the demonstration program is completed. It will also generate about 170,000 acre-feet of water into the Missouri River basin per year.

Senator ABDNOR. Then we are doing all right.

Secretary WATT. It is a good program.

Senator ABDNOR. Thank you. Again I say I know I ask a great deal from you folks, and we do appreciate that.

DISTRIBUTION OF COSTS AND BENEFITS

Senator McClure. Just one comment in that regard. I am a little troubled, and I would like for you to trace the revenues and benefits for me, because we may see a situation developing here where the cost is assigned to a specific group of our people in the country, and the benefits accrue to a different group of people.

Secretary Watt. There is some of that.

Senator McClure. If there is a demonstrable degree of that shift, maybe we ought to find a different distribution of revenues or different allocation of expense.

Secretary Watt. Augmentation would supply a substantial increase of the peaking power that would be very beneficial to those users who would pay for it, plus you would get an additional water supply for agricultural purposes which could be sold. So you are a winner all the way around, but we will do that for you.

Mr. Broadbent. We will provide an answer for the record, but I might comment, it looks like the water augmentation program when fully operational in the Colorado River basin would cost between $11 to $13 million per year. We are looking at benefits exceeding $100 million. Out of those benefits of $100 million, about $30 million are actually energy benefits. Another $40 or $45 million are water quality benefits, and those are important to us because of the Mexican Water Treaty, and there are additional water benefits for irrigation.

[The information follows:]

Colorado River Augmentation Demonstration Program

The Bureau of Reclamation estimates that during each of the 5 years of randomized seeding of the demonstration program, an additional 200,000 acre-feet of water will be produced in the upper Colorado basin. This added flow has a value of $8.4 million annually. During a subsequent operational program in five high-elevation areas within the Colorado River basin, we estimate the augmentation potential to be 1,315,000 acre-feet in the upper basin, 298,000 acre-feet in the lower basin, and 533,000 acre-feet in surrounding basins. This flow augmentation has a projected value of $109 million annually from the following sources: $29 million from increased power generation based on coal replacement cost of 20 mills per kilowatt-hour, $41 million in salinity reduction using an average value of $450,000 for each milligram per liter reduction in dissolved solids at Imperial Dam, and $10.5 million from new water supplies to reduce deficits and for new uses within the upper Colorado basin. An estimated value of $50 per acre-foot was used for the 298,000 acre-feet of augmentation in the lower Colorado basin and $25 per acre-foot for the 533,000 acre-feet increase in adjacent basins.

Consequently, we project that well over half—$42 million—of the cost of the $68.4 million demonstration program will accrue as benefits to the Colorado River basin during its 5 years of randomized cloud seeding and that the remaining investment would be rapidly repaid in subsequent operational seeding. The revenue to finance the demonstration program will come directly from the region which will receive these benefits, the basin itself, as well as southern California and Arizona where Colorado River hydropower and water are distributed. An operational program could be performed at a cost of $11 to $15 million annually so that new power sales alone could easily cover expenses.

MEXICAN WATER TREATY

Senator McClure. And the water treaty is a national obligation by statute?

Mr. BROADBENT. That is right. We are meeting with the Colorado River basin States next week to talk about our proposal. They have endorsed it in principle. They are arguing if they want to fund it 100 percent or not.

Senator McCLURE. Thank you very much.

QUESTIONS SUBMITTED BY SENATOR ABDNOR

Senator ABDNOR. I just want to submit some questions in writing.

Senator McCLURE. Of course, without objection, they will be included.

[The questions and answers follow:]

COST SHARING

Senator ABDNOR. Do you feel legislation is needed to authorize cost sharing on Reclamation projects?

Secretary WATT. Recommendations for cost sharing have not been finalized. The need for legislation cannot be determined until the spe-cifics of the cost-sharing proposal have been agreed to.

Senator ABDNOR. Is the Department taking into account the ability of States and local project sponsors to cost share?

Secretary WATT. Equity considerations are an integral part of our cost-sharing deliberations.

Senator ABDNOR. Reclamation law provides for a calculation of repayment ability in charges assessed to irrigators. Will any new cost-sharing requirements involve a similar test?

Secretary WATT. This is under consideration.

AGREEMENTS BETWEEN RIVER BASIN STATES

Senator ABDNOR. Are there other river basins, like the Missouri River basin, in which upper basin States have made sacrifices for the benefit of downstream States under comprehensive river basin plans of development, in which the downstream features have been completed, but the upstream features have not?

Secretary WATT. The water resources development situation in the Colorado River basin is similar to the Missouri River basin. The seven States of the basin—Arizona, California, Colorado, Nevada, New Mexi-co, Utah, and Wyoming—entered into an interstate compact with the consent of Congress in 1922. The compact apportions the waters evenly between the upper and lower basins and denotes the point of demarcation and names the States in each basin. The compact does not apportion the waters among the individual States. The compact recognizes the right of the Republic of Mexico to share in the Colorado River flows, later formally recognized by treaty between the United States and Mexico in 1944.

The upper basin States—Colorado, New Mexico, Utah, and Wyo-ming—entered into a compact in 1948 to apportion the upper basin share of the Colorado River among each of the four States.

Virtually all of the lower basin's portion of the waters have been developed at the present time. The Supreme Court in 1963 apportioned the waters among the three lower basin States of California, Nevada, and Arizona as a result of the suit between California and Arizona over the river flows.

Less than half of the upper basin's portion of the waters have been developed to date although about half of the remaining undeveloped portion is now under development through Federal reservoir construction. Problems of salinity of the waters through irrigation return flows and natural source drainage impose a burden on further development and use, particularly on the upper basin. The allocation for Mexico imposes a further burden of uncertain distribution effect.

EQUITY IN COST SHARING

Senator ABDNOR. Your efforts to assist North and South Dakota are evidence of your recognition of the problem, but will the new principles and guidelines and additional cost-sharing requirements take into account the uncompleted portions of comprehensive river basin plans? That is, will upstream States which have already provided substantial cost sharing through sacrifices of land, be given credit in any new cost-sharing requirements?

Secretary WATT. Equity considerations are an integral part of our cost-sharing deliberations.

HIGH PLAINS COOPERATIVE PROGRAM

Senator ABDNOR. For the record, what is the current status of the HIPLEX program? When will active research under HIPLEX be re-sumed, and can anything be done to accelerate research on summertime cloud systems, which are important to farmers and ranchers in the semiarid regions of the country?

Mr. BROADBENT. We will be happy to provide that information for you.

[The information follows:]

HIGH PLAINS COOPERATIVE PROGRAM

The High Plains cooperative program will be suspended after fiscal year 1982 and a wrapup report will be published and distributed to interested parties. Additional write-in appropriations for fiscal year 1982 will enable project scientists to perform more needed analyses of data. This will contribute to the wrapup report and assist future investigators in applying what has been learned during this research program.

The Bureau of Reclamation has no plans to resume major field experiments for High Plains weather modification at this time. While acceleration of continued research may be desirable, we believe it is time for the lead in this program to be shifted from the Federal Government to the States. The program has generated considerable data and a continued analysis of this data is desirable for the benefit of future cloud seeding programs.

COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

Senator ABDNOR. Finally, what are the implications of the Colorado River enhanced snowpack test—CREST—for water resources development in other areas?

Mr. BROADBENT. The Colorado River demonstration program is de-signed to test operational techniques of weather modification in all ma-jor mountain areas of the Colorado River basin. Successful demonstration could lead to basinwide cloud seeding in the early 1990's which would add an estimated 1.6 million acre-feet of water to the Colorado flow. We estimate adjoining river basins would benefit by over half a million acre-feet of added runoff: Approximately 170,000 acre-feet in the Missouri, 125,000 acre-feet for the Snake, 116,000 acre-feet in the Rio Grande, and an additional 40,000 in the Arkansas.

Senator ABDNOR. Will the results be applicable to the Missouri River basin, for example; and, if so, when will data be available which can be applied in other river basins?

Mr. BROADBENT. Techniques of seeding tested in the Colorado River basin could likely be applied in the Missouri River basin soon after the demonstration program is completed in fiscal year 1991. More specifically, we will be assessing seeding effectiveness in all major watersheds of the Colorado River. These results are expected to be applicable in all adjoining river watersheds if such use is authorized.

STATEMENT OF R. N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION

Senator MCCLURE. Commissioner Broadbent, I understand that you have not yet given your statement. It will be made a part of the record. I understand that you have some slides you brought to show to the committee, and if you desire to do so, we would welcome that presentation at this time.

Mr. Broadbent, why don't you proceed as you wish.

Mr. BROADBENT. We have about a 15- or 20-minute slide presentation on our $950 million program for the Bureau of Reclamation.

This is my first opportunity to be here, and I appreciate it very much. With me is Gene Hinds, Assistant Commissioner, Planning and Operations; and Bill Klostermeyer, Assistant Commissioner for Administration.

We thank you for the opportunity to present our fiscal 1983 budget request.

PROBLEMS FACING THE WEST

We are all aware of the problems facing the Nation, particularly those in the West, regarding the need for an adequate, dependable supply of good quality water. The administration is committed to water resources development in the West, and Reclamation is striving to accomplish our goals, meet our commitments, and improve our effectiveness. Our energies will be directed toward meeting mission objectives within existing budget and personnel constraints.

BUDGET REQUEST

We are optimistic about our proposed fiscal year 1983 request before the Congress which totals $950.3 million. This is an increase of $179.1 million over the fiscal year 1982 appropriations of $771.2 million.

The $950.3 million is broken down as follows: $666.6 million would go for construction; $140.8 million is for operation and maintenance; $39.6 million would go to the loan program; $36.5 million for general investigations; $1.0 million for the emergency fund; and $65.8 million would be for general administrative expenses, trust funds, and permanent appropriations.

CONSTRUCTION PROGRAM

The construction program of $666.6 million will continue ongoing work on 70 multipurpose projects and 2 preconstruction planning projects. For the first time in 3 years, we anticipate initiating construction on new water resources projects. A budget amendment will be submitted to provide funding for the new starts. The construction budget is subdivided as follows, but without the recognition of $71.7 million for underfinancing: $651.8 million for regular project construction; $26.6 million for rehabilitation and betterment; $25.8 million for safety of dams; $19.4 million for drainage and minor construction; $13.7 million for recreational and fish and wildlife facilities; and $1.0 million for preconstruction planning

CENTRAL ARIZONA PROJECT

The Central Arizona Project again will require the largest request for construction in the amount of $161 million. This project is now about 32 percent complete. Construction will continue on four pumping plants and several reaches of the Granite Reef aqueduct, as well as the Salt Gila aqueduct and the transmission division.

All major construction contracts for delivery of water to the Phoenix area through the Granite Reef division have been awarded, many of which have been completed, but several will be continuing in fiscal year 1983.

Preconstruction work will continue on the regulatory storage, Gila River, Indian distribution, and Tucson divisions, and on non-Indian distribution systems.

Central Utah Project

Our funding request for the Central Utah Project amounts to $89.9 million. Of that amount, $82.2 million is earmarked for the Bonneville unit and will allow work to continue on several features.

Work is underway on the Upper Stillwater Dam foundation and a contract for the dam embankment will be awarded. Work will continue on the Strawberry aqueduct which is the 37-mile-long system of canals, pipelines, and tunnels that will convey water along the south side of the Uinta Mountains.

Construction will be completed on the Vat tunnel, the Rhodes and Hades tunnel complex, and the Strawberry tunnel intake structure. Construction also continues on the Jordan aqueduct system.

LOCAL COST SHARING

The Central Utah Water Conservancy District has offered to contribute $10 million toward the construction costs. This action provides strong support for the administration's efforts to have non-Federal interests accept a more responsible role in the financing of projects.

Dolores Project, Colorado

In Colorado, several construction activities being undertaken simultaneously on the Dolores project will require $46.8 million. Work will continue on the construction of McPhee Dam and the Dolores tunnel and canal. Construction will be initiated on the Great Cut pumping plant and on the first section of the Dove Creek canal.

Dallas Creek, Colo.

For the Dallas Creek project, we are asking $43.4 million to continue construction on stage 2 of Ridgway Dam. Studies for the Ridgeway Dam powerplant have been completed, but construction funding will be included in future budget requests.

Central Valley Project

The funding request for the Central Valley project is $60 million. Of this, $38.2 million is for continued construction of the San Felipe division, including the scheduled completion of the Pacheco tunnel.

The Sacramento River division will require $11.8 million to continue construction of the Tehama-Colusa Canal and distribution facilities. Construction of all proposed distribution systems, most of which are buried pipelines, will be completed by the end of fiscal year 1983.

SAN LUIS CANAL, LANDSLIDE

The subsidence correction work on the San Luis Canal lining, turnouts, and structures will be continued in a joint State-Federal effort. Repair work continues on the slide which occurred last September on the upstream face of the San Luis Dam.

Senator McCLURE. Have you pinpointed the cause of the slide? You mentioned some moist materials——

Mr. BROADBENT. As I understood what happened, the material underlying the upstream portion of the dam in that location was examined during construction and judged to be stable. Since it was very deep and stable, removal was expensive. It posed no safety hazard, so the engineers decided to leave the material in place, but now part of the dam has slipped.

Senator McCLURE. I understand that, but how did that occur? That material was anticipated, the design was judged to be sufficient. Something obviously happened which was not correct.

Mr. BROADBENT. You are correct, there is no question about that. You can see the slope material that slid. While not anticipated, this type of problem does not endanger the dam. It did, however, require us to go back in and make the repair.

Senator McCLURE. All of us have to be concerned about that, when something of that magnitude happens when not anticipated.

Mr. BROADBENT. You are correct.

Senator McCLURE. Why was it not anticipated?

Mr. KLOSTERMEYER. Actually, it was the foundation.

Senator McCLURE. But that foundation was analyzed with core samples and something happened that you didn't expect.

Mr. BROADBENT. I think that is true. I would say that is true of any construction project, at least those I have been involved with.

Senator McCLURE. It was not anticipated.

Mr. BROADBENT. There was a mistake; it did happen. I will provide further details regarding the San Luis slide for the record.

[The information follows:]

SAN LUIS DAM SLIDE

The slide on the upstream slope of San Luis Dam resulted from the combination of reservoir drawdown and low-strength material under the upstream portion of the dam. Reservoir drawdown results in decreased stability for upstream slopes, which does not generally pose any public safety problem because considerable freeboard is available at the time any slide might occur. That was the case at the San Luis Dam. The foundation materials left in place under the upstream portion of the dam, have exhibited considerably less strength during project operation than was expected, based on observations during design and construction. There is considerable indication that the foundation clays have been reduced in strength to values close to residual strength.

The concept of the use of residual strength for design was not a generally accepted design practice when San Luis Dam was designed and constructed in the 1960's. On the basis of peak strengths of the foundation materials, which was the design practice at that time, the original design would have been entirely adequate.

DAM SAFETY STUDIES

Senator McClure. You see, I get nervous. I live in Idaho. We have not yet forgotten the Teton Dam and it bothers me because the credibility of the agency which is involved here is very much at stake, and I don't mean to overstate that.

Mr. Broadbent. Since Teton Dam—and this dam was actually built before Teton—we have instituted practices far more comprehensive, and the geology necessary to start a dam is far more exhaustive.

For example, many of the dams we were ready to build after Teton were held up 2 or 3 years to do additional design work and geological studies so we could do the right thing. Several of those dam sites had to be relocated.

Senator McClure. I understand that and I appreciate the answer to the question. Again, I don't wish to overstate it, but every time something like this happens, people stop and ask questions: Why, when the Bureau of Reclamation is among the premiere dam builders of the world, do things like that happen? I suspect it gets back to the same thing we found in the Teton Dam, that when you go for years and years and years doing the same thing in the same manner and it always works, perhaps you get a little less redundant in the reviews than you otherwise would be.

Mr. Broadbent. After Teton, the Bureau instituted a rigorous, independent review process.

Senator McClure. You have become very redundant now?

SAN JOAQUIN VALLEY WATER DELIVERY

Mr. Broadbent. Yes, but I might state that after the San Luis Dam slide, there was a serious question on the ability to deliver water to most of the Central Valley projects. Because of our prompt work and the expeditious work of the contractor, we will be able to make full water deliveries to the San Joaquin Valley users this season.

That means billions of dollars of crops to the United States that otherwise may not have been produced.

AUBURN DAM, CALIF.

At Auburn Dam, $1.7 million will be used for security and other services involved with existing lands and facilities and for continuation of lower American River studies. Another $3.3 million for the Auburn-Folsom South unit will be used to complete the ongoing work for the recreation facilities at Sugar Pine Dam and Reservoir.

COLUMBIA BASIN PROJECT

The amount included for the Columbia basin project is $50.4 million. Work will continue downstream from the Grand Coulee third powerplant on slope stabilization and channel erosion protection to prevent damage to the riverbanks from rapid fluctuation of water levels during powerplant peaking operations.

Pump and generating units 11 and 12 at Grand Coulee Dam are scheduled to be completed in fiscal year 1983. The installed capacity of each of the six pump-back units is 50 megawatts. When complete, the existing Grand Coulee powerplants and the third powerplant will be up to design capacity of 6,480 megawatts.

BLOCK 26 FACILITIES

Construction of the 13,700-acre block 26 lateral facilities will be initiated in fiscal year 1983 with completion scheduled for the spring of 1984. This is the last block of lands to be developed under the existing repayment arrangements on this project, bringing the total development to 557,630 acres. The remaining 530,000 acres will require amended repayment arrangements at a considerably increased price before construction can get underway.

FIRE AT GRAND COULEE DAM

To bring you up to date, work continues on correcting the damage caused by the fire which swept through one of the main transmission line tunnels that carries power between the third powerplant and the switchyard. The fire was attributable to a breakdown in the cable insulation. An aerial bypass line was constructed just downstream from the dam to maintain service and meet power demands while repairs are being made.

OROVILLE-TONASKET UNIT, COLUMBIA BASIN PROJECT

The $16.7 million request for the Oroville-Tonasket unit will continue the work of replacing an antiquated irrigation system. Some work on river crossings is underway and we will continue construction on the pressurized water distribution system.

FRYINGPAN-ARKANSAS PROJECT

We are asking $12.7 million for the Fryingpan-Arkansas project. Work includes the construction of pumping plants, surge tanks, and associated facilities for the Fountain Valley conduit and the security lateral which will deliver water to the town of Security, Colo. Completion of this work is scheduled for the spring of 1983. Unit 1 at the Mount Elbert powerplant went on line last September and the plant was dedicated in October 1981. It is the first of two units planned at Mount Elbert, each generating up to 100,000 kilowatts of hydropower. The second unit is scheduled to go on line in 1984.

MCGEE CREEK, OKLA.

Construction of McGee Creek Dam will continue in fiscal year 1983 with the $53 million allocation for McGee Creek project in Oklahoma. Work will continue on dam construction and associated clearing and fencing. Atoka, Oklahoma City, and other areas in south-central Oklahoma will receive supplemental municipal and industrial water from the McGee Creek project. Construction will be initiated on the pumping plant and aqueduct.

SAN LUIS PROJECT, CLOSED BASIN DIVISION

A total of $4.8 million is requested for the Closed Basin division of the San Luis project in Colorado. The work will involve drilling and redeveloping wells for a water supply to help Colorado meet its water release commitment to Texas and New Mexico under the Rio Grande Compact. Water from the wells will be delivered to the Rio Grande River through a system of laterals and a canal for which construction will start in fiscal year 1983.

GARRISON DIVERSION UNIT, NORTH DAKOTA

The sum of $4 million is being requested for the Garrison diversion unit in North Dakota. The January 28, 1982, court decision makes a significant difference in what we will be able to do in 1983. Construction may now commence on several features of this unit. The State of North Dakota has proposed that the construction of the project be undertaken in two phases which we are considering. The first phase would encompass about 85,000 acres and consist of features that do not affect flows into Canada. Phase 2 would be undertaken only when Canadian concerns are resolved.

NORTH LOUP DIVISION, NEBRASKA

River diversion and foundation work for Calamus Dam have been completed. We are requesting $22.6 million to continue the construction of Calamus Dam, stage 2, which is one of the major features of the North Loup division of the Pick-Sloan Missouri basin program in Nebraska. Construction of Mirdan Canal will also be underway in fiscal year 1983.

SOUTHERN NEVADA WATER PROJECT

We are asking $2 million to complete the municipal and industrial water system on the southern Nevada water project. The programmable master supervisory control and communications system will be installed which will substantially complete all work on the project. It will then be turned over to the water users for operation.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS

A request of $44.3 million is being made for title I activities of the Colorado River basin salinity control projects for fiscal year 1983. Construction will then continue on the Yuma desalting plant and pretreatment system, the protective and regulatory pumping unit transmission line, and on fish and wildlife mitigation measures. Work will also continue on the irrigation efficiency program which will reduce the drainage return flow from the Wellton-Mohawk Irrigation and Drainage District.

For work under title II of the act, we are requesting a total of $16.3 million which will be used to continue work on the Grand Valley canal and laterals to eliminate salinity resulting from seepage. The work on the Paradox Valley unit includes evaluation of the deep-well, brine injection alternative for reducing salinity. Activities will continue on the Las Vegas wash unit to verify groundwater conditions and determine the most effective way to reduce the salinity in the wash.

REHABILITATION AND BETTERMENT OF EXISTING PROJECTS

The rehabilitation and betterment portion of the construction program is $26.6 million in fiscal year 1983. Work on 18 separate units will be underway. The Yakima-Tieton Irrigation District will require $16.8 million for rehabilitation work that is estimated to cost $64.8 million. Non-Federal funds in the amount of $2.5 million will be available for this work during fiscal year 1982.

DRAINAGE AND MINOR CONSTRUCTION

The drainage and minor construction portion of the construction program will require about $19.4 million involving 18 projects. Two of the major items of work relate to correcting seepage problems at Twin Buttes Dam and Foss Dam.

Safety of Dams Program

The request for the safety of dams program amounts to $25.8 million and involves 11 dams. Work on Gibson Dam will be completed this year as a part of this program. Construction will continue on Lake Sherburne Dam, Mont., to raise the crest of the dam and construct an auxiliary spillway to accommodate the inflow design flood. Advance planning and modification report work will continue on five dams plus the administration of the Department of the Interior's dam safety activities. We will initiate construction of safety modifications at Hyrum Dam, Utah; Stony Gorge Dam, Calif.; and Willow Creek Dam, Mont., during fiscal year 1983.

LOAN PROGRAM

We are requesting a total of $39.6 million for the loan program in fiscal year 1983 which will keep all 10 ongoing projects on schedule and fund the administration of the program. Work will be completed on three loan projects during the year. Work will continue on seven projects which include the San Benito Water Conservation and Flood Control District and the Eastern Municipal Water District, both in California, and involves constructing pipeline distribution systems, pumping plants, and related facilities. About $7 million will be utilized for work on three loan projects in the State of Texas, one of which is the Delta Lake Irrigation District in the Lower Rio Grande Valley.

OPERATION AND MAINTENANCE PROGRAM

The $140.8 million request for the operation and maintenance program in fiscal year 1983 reflects an increase of $22.3 million over the fiscal year 1982 appropriations. The vast majority of the funds are needed for the normal operation of the reserve works on 32 projects, for associated programs, and for scheduled maintenance. Some essential maintenance has been deferred from previous years due to budgetary constraints.

We have continued to emphasize the safety of our dams and other structures, and we propose increased funding for the examination of existing structures program to carry out the initial inspection and data analysis for these structures. We are emphasizing the uprating of powerplant facilities in order to increase peaking capacity. The uprating program being completed in fiscal year 1983, using both revenues and appropriated funds, will increase installed capacity by 132.8 megawatts.

MIDDLE RIO GRANDE PROJECT, NEW MEXICO

We will continue work on the Middle Rio Grande project, New Mexico, where we initiated work in fiscal year 1982 to rehabilitate the San Acacia-Elephant Butte low-flow conveyance channel. Restoration of the channel will enable New Mexico to deliver to Texas the quantity of water required by the Rio Grande Compact.

GENERAL INVESTIGATIONS

The total request for fiscal year 1983 for the general investigations appropriation is $36.5 million. Continuing ongoing plan formulation investigation work on 45 projects will require $24.6 million. One major emphasis continues to be energy development, and another is municipal and industrial water supplies. In 1983 we will complete three appraisal, two feasibility, and six special investigations, one of which is the wind-hydroelectric energy project near Medicine Bow, Wyo. The 2.5-megawatt Boeing unit has been erected, but lack of funding in fiscal year 1982 prevented testing. The 4-megawatt Hamilton-Standard unit is scheduled for initial operation late this year.

We will be initiating 13 new studies in fiscal year 1983 which have a high level of local support. The major emphasis will be energy and municipal and industrial water development.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM

We are requesting $4.3 million for the atmospheric water resources management program. The 1983 program will concentrate on the Sierra cooperative pilot program and the Colorado River augmentation demonstration program. We are very optimistic about the future of the program and its potential to augment water supplies in the West. We are currently seeking cooperation from the Colorado River basin States on funding from power revenues so we can accelerate our work on the demonstration unit.

WATER RESOURCES PLANNING AND ENGINEERING RESEARCH

Planning and engineering research will focus on developing and implementing better methods and techniques for managing available water supplies and conserving existing supplies. Many research activities will be underway to assist our planners, designers, and project operators to develop and operate projects more efficiently and effectively. This will include research to support our dam safety program. The fiscal year 1983 program totals $5.2 million.

ADVANCE PLANNING

The advance planning section is new to the general investigations appropriation this year. We are in the process of revising the planning procedures to reduce the time it takes to get a water resources project work under construction. We are requesting $2 million in fiscal year 1983 for work on 11 advance planning new starts. This procedure will allow us to continue preauthorization studies without a break while waiting on construction authorization. When construction authorization is made, we can move immediately into preconstruction work which will provide a tremendous cost saving to water resources development.

EMERGENCY FUND

One appropriation not normally discussed in our appropriation hearings is the emergency fund. During fiscal year 1982, we will exhaust all funds in this appropriation to perform corrective work at Grand Coulee third powerplant and San Luis Dam. Also we have used excess funds from the Teton Dam claims account to meet those emergency situations. Therefore, we have requested $1 million for the emergency fund in fiscal year 1983.

PROGRAM ACCOMPLISHMENTS AND BENEFITS

Since 1902, Reclamation's mission has evolved into a complex, multipurpose water resources program. It has expanded from assisting regional concerns to assisting many nations worldwide. The Bureau stands ready with its expertise to help our Nation solve its energy and water development and management problems.

The value of the Reclamation program, especially to those throughout the 17 Western States, has become abundantly clear. Providing a dependable supply of good quality water for farms, homes, and industry and the generation of hydropower has helped to establish a strong economic base for the West. The production of food and fiber, the demand for equipment and services, and the West's ability to absorb migrating citizens from the other parts of the Nation have been undeniably beneficial to our country.

Allow me to list a few statistics applicable to 1980.

Hydroelectricity generated amounted to 46 billion kilowatt-hours, an equivalent of 83 million barrels of oil; or 22 million tons of coal; or 496 billion cubic feet of natural gas.

Water deliveries totaled 30.2 million acre-feet—that is, 9,847 billion gallons—and population served was a record high of 22.1 million.

Flood control benefits amounted to $177.7 million, more than 2½ times the 31-year average of $66.2 million.

Food, fiber, and forage crops produced totaled $7.4 billion, exceeding the 1979 production by $0.5 billion.

Electrical energy revenues were $354 million, an 8-percent increase over the previous year.

In 1981, a total of 11,000 work-years of contractor employment were utilized.

As many prominent figures on the national scene have said recently, the lack of water could be this Nation's next crisis—even more severe than the energy crisis which shocked and sobered the American people.

We must plan now and prepare for future demands which will continually increase. Providing a dependable supply of good quality water, sufficient for today and for generations to come, is one thing that we cannot afford to put off until tomorrow or better times.

This concludes our presentation. I invite any questions you may have.

NATIONAL WATER RESOURCE DEVELOPMENT POLICY

Chairman HATFIELD [presiding]. Thank you very much, Commissioner Broadbent.

First, Mr. Secretary, I would like to thank you for shifting your schedule so you could be here today. I know it made it very difficult for you to meet this schedule, and I want to apologize for being late as well. But I had a meeting called by the leadership that I had to attend.

Mr. Secretary, I have several questions. The first relates to your testimony where you indicated the administration's strong support for water resource development reflected in the Bureau of Reclamation budget.

But upon reviewing the administration's total budget as it relates to water resource development, I find some interesting inconsistencies.

For instance, I find no funding requested for the Nation's water policy planning. I notice that the Corps of Engineers' budget is down 6.1 percent, but when you consider revenues from the Waterway Trust Fund, which probably will not be available, the reduction is somewhere around 15 percent. The Bureau of Reclamation budget is up 22.8 percent. I find that there are major new policy changes proposed in the Corps' budget—water user fees and cost sharing on projects, and I find no major policy changes proposed in the Reclamation budget.

I find that Corps construction is down by some $200 million while the Reclamation construction program is being increased by $118 million.

Obviously this change in emphasis and the lack of focus on the national water policy has created in the minds of the critics as a favoritism toward the West, sort of a preferential treatment. This, of course, could make it more difficult for those of us who are engaged in trying to meet the entire Nation's water needs as well as our own region, because we need the cooperation and support of Senators far beyond the Western States.

So my question really, in light of these observations, would be to ask you to comment on how the administration plans to establish a coordinated national water policy, and if you would also explain the administration's position on what entity, if any, should perform the national water planning, and why, because I understand the administration wants to abolish the Water Resources Council, which has been the key, leading agency up to this point.

So, that is generally my question, and I will leave it to you how you want to handle it.

USER FEE AND COST-SHARING PROPOSALS

Secretary WATT. It is an appropriate question. This administration is committed to shifting as much of the cost to the beneficiaries of Government services as we can. The facts are that those of us from the West, including yourself and all the work that you have done for water resource projects, has been built around the concept that the users would pay. The Bureau of Reclamation programs for many, many years have provided for that concept. Before we commence the construction of any projects, we must enter into contracts for the sale of the multiple benefits to be derived and the power sold. We must have contracts for the sale of water and power so we make arrangements with the beneficiaries for the construction and operation and maintenance of the projects. The Bureau of Reclamation, for many years prior to the Reagan administration, developed the concept that users would pay a portion, if not all, of the costs incurred in building, operating, and maintaining a multipurpose reclamation project.

That has not been the case with the Corps of Engineers through its history.

Therefore, when we came to the 1983 budget, the administration took the position that some of the Corps' activities would be suspended until they could work out a user fee program of some nature that would allow beneficiaries to pay as we have in the Western States.

So the facts are that we Westerners have been paying for a significant share of the cost invested in Western reclamation projects. That is why when the battle got tough at OMB, we were successful in presenting our point and prevailing on the arguments why we needed to go ahead with the 23-percent increase for the 1983 program.

PRINCIPLES AND GUIDELINES FOR NEW STARTS

Now, we are working with the Cabinet Council to develop more meaningful principles and guidelines for selecting new starts.

You will recall the last administration had their hit list, and then they developed principles and standards, which in my judgment and opinion were really written and developed in order to stop new starts throughout the Nation.

We have proceeded to strike down those principles and standards and will be announcing shortly principles and guidelines and the cost-sharing formulas that will be based on the ability of the people to repay, based on net benefits derived from the projects. We think that will be well received based on our preliminary negotiations with the governors and other user groups.

WATER RESOURCES COUNCIL

We are recommending there be no funding for the Water Resources Council or most of the River Basin Commissions for 1983. My personal experience, when I was in the Department of the Interior during the

Nixon and Ford years, was that the Water Resources Council was an ineffective, sterile group that produced few, if any, benefits.

When I was given the chance to serve as Secretary of Interior I was so moved on that point of view that I proposed the Water Resources Council be eliminated in 1982. My biggest surprise was that I don't think we have one Governor who has been fighting for its reestablishment. I found few advocates for it because it did not do much in preparing America for a crisis I see coming in the 1990's.

CABINET COUNCIL AND INTERAGENCY COORDINATION

So who then will do the water resource planning remains your question. It is a critical one because it is important that there be proper planning. I think the answer comes from the elevating of the ultimate planning for the Federal Government to a Cabinet-level group to focus on it. We can get the Corps and Bureau of Reclamation and the Environmental Protection Agency to work together to coordinate those activities and bring the Governors into a much more aggressive role in planning the future for their States under State water law, which I think is critical.

As I mentioned to Senator Abdnor, last week I was in Iowa and met with Governor Ray and urged him to develop an interstate water compact to deal with the Missouri River basin area.

We feel we are in better shape by eliminating the Water Resources Council and proceeding with interagency coordination through a Cabinet council.

CONTINUING CONSTRUCTION PROGRAM

I understand that the Corps projects were, in some instances, being completed. Therefore, they didn't have the potential for continuing construction as in Bureau of Reclamation programs. We have a $118 million increase in construction this year, with no new starts, so we are in an expansive phase. That is one of the explanations for the Corps not having the increase we have.

I think, Senator, I have touched on most if not all of the dimensions of your question.

RETURN ON INVESTMENTS FOR CORPS OF ENGINEERS PROJECTS

Chairman HATFIELD. Mr. Secretary, you would surely want the record to reflect that the Corps in its multipurpose projects, there is 100-percent return on investments plus interest made over the life of the project, low interest rates on cost recovery of these multiple-type projects, water supply, and the hydroelectric power generation. Many features of multipurpose projects are recoverable, even in terms of the operation and maintenance for navigation.

There are local contributions made in kind, transfer of right of ways, property, exchanges, and so forth. I would not want it to appear, and I am sure you would not either, that Reclamation activities are somehow fully repaid whereas the Corps is not. There is still a large differential here in these items that I recited, and I note even in your own testimony as far as cost recovery, on page 3, you note that the irrigation does not reflect the nature of farm ownership; you say the rates paid for valuable water are too low.

COST RECOVERY PROGRAMS

So, what are you doing to bring about a change in those cost-sharing recovery programs? Would you disagree about the analysis with what the Corp projects cost? There are costs for many different features—there are multipurpose projects, flood control, et cetera.

Secretary WATT. Yes; and I appreciate your clearing up the record on that, because both the Corps and the Bureau of Reclamation have many activities which are not reimbursed, such as not all flood control and not all fish and wildlife activities are subject to cost recovery programs. The criteria that was used to evaluate the Corps and the Bureau programs was the same. I think the point I was making is that the Bureau of Reclamation programs generally have more cost recovery than many of the Corps projects do, because of the heavy emphasis that needs to be carried out for navigation, where the Reclamation projects have many, and irrigation and power are a fundamental portion of the program.

We are looking at user fees on several programs, and I think we will enhance the beneficiary payment for both the Corps and Bureau of Reclamation program in the years ahead.

NAVIGATION BENEFITS

Chairman HATFIELD. As an addendum, I might point out, too, that the Corps navigation projects, particularly the ocean-going port projects, provide about $8 billion annually in receipts, which will certainly have to be considered in the cost recovery equation. These are direct national benefits that go into the general treasury.

WATER CRISIS IN THE 1990'S

I am still hopeful, Mr. Secretary, that you will give your leadership in strengthening the national protection of this water problem, not just the regions we represent. I have for long felt the water program crisis is coming quickly upon us and is far more significant in magnitude and impact than the energy crisis that we faced up to this point.

Secretary WATT. I would like to emphasize and show full concurrence with your statement. As I travel around the country, I point out to the audiences that the biggest domestic crisis we may ever encounter may come in the 1990's with water shortages. As I analyze the capability of America to meet this crisis, it is frightening and sickening.

As you look to the New England, eastern, and industrial-based States, we find that their water systems are rotting and rusting out. It is going to take billions of dollars to rebuild them. In the South they have tremendous storage and municipal and industrial needs requiring millions of dollars. In the West, billions of dollars are needed. We are not addressing that problem now, and I am hopeful that economic recovery will come soon so that we can really build a foundation to hold that off, but I am fearful for it. We will be able to look back to the beginning of the 1970's where we should have been moving more aggressively to answer the problems that are going to really come crashing on us in the 1990's. It hurts me as a leader in the water resource development field to know what needs to be done, but because of the lack of economic vitality, to not be able to commit the resources I think should be committed to this national need.

Chairman HATFIELD. If we have the mechanisms in place, Mr. Secretary, and they are all upgraded, modernized, and we have still had the experience leading to a 30-day water supply of some of our cities and metropolitan areas, so that is another part of that. I agree with you; I was not happy with the performance of the Water Resources Council, but I don't think we can afford to permit a vacuum to exist as far as national planning, national leadership, and national coordination.

Secretary WATT. I agree with that; I feel we are providing that leadership.

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

Chairman HATFIELD. I understand the President's 1983 budget recommends no funding for the Interstate Commission on the Potomac River Basin. Could you explain the basis and rationale for this decision, particularly in light OF THE FACT that the Federal share has been provided every year since 1949, and for the first time in recent years, all of the signatory States— Virginia, Maryland, Pennsylvania, West Virginia, and the District of Columbia—will provide their non-Federal share of operating expenses?

Secretary WATT. The Interstate Commission on the Potomac River Basin is a compact among four States and the District of Columbia. The United States is not a compact signatory.

The Commission has historically received a direct Federal contribution. This has been justified on the basis of the special Federal interest in providing water supply to the Capital. However, that statutory responsibility lies with the Corps of Engineers, through the Washington aqueduct. The Corps' role is in no way diminished by the decision to discontinue direct contributions to the Commission.

Water resources management and planning is a State responsibility. The Potomac Commission is one of about 25 similar interstate compacts across the country, but it is the only one to have received a direct Federal contribution even though the United States is not a member. In most of the Western States, the level of Federal land ownership in basins with compacts is significantly greater than the 15- to 20-percent level in the Potomac River basin.

Chairman HATFIELD. Without objection, I would like to include in the record the statement of the Chairman of the Interstate Commission on the Potomac River Basin along with some other material.

Also, Mr. Gerald Hansler, Executive Director of the Delaware River Basin Commission, has asked that his testimony regarding the 1983 budget of that Commission be included in the record.

[The information follows:]

STATEMENT OF ROCKWOOD H. FOSTER, CHAIRMAN, INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

THANK YOU, MR. CHAIRMAN, FOR THIS OPPORTUNITY TO SUPPORT A FISCAL YEAR 1983 FEDERAL APPROPRIATION FOR THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN. MY NAME IS ROCKWOOD FOSTER. I AM THE CHAIRMAN OF THE COMMISSION'S SECTION FOR COOPERATIVE WATER SUPPLY OPERATIONS ON THE POTOMAC (CO-OP) AND ONE OF THREE COMMISSIONERS REPRESENTING THE DISTRICT OF COLUMBIA. I HAVE WITH ME PAUL EASTMAN, EXECUTIVE DIRECTOR OF THE COMMISSION.

THE PRESIDENT'S FISCAL YEAR 1983 BUDGET RECOMMENDED NO APPROPRIATION FOR ICPRB. WE REQUESTED $65,600 AS THE FAIR FEDERAL SHARE OF THE TOTAL BUDGET OF $584,000. THE ICPRB INCLUDES THREE PRESIDENTIALLY APPOINTED COMMISSIONERS, WHOSE VOTES REPRESENT THE INTERESTS OF THE FEDERAL GOVERNMENT, ONE OF THE LARGEST WATER USERS AND RIPARIAN LANDOWNERS ON THE RIVER. THE FEDERAL SHARE HAS HISTORICALLY BEEN EQUAL TO--NEITHER MORE NOR LESS THAN--THE LARGEST STATE CONTRIBUTION, TANGIBLY SIGNIFYING A FULL AND EQUAL PARTNERSHIP IN A VITAL JOINT MISSION.

THE AUTHORITY FOR THE FEDERAL APPROPRIATION TO ICPRB IS ARTICLE IV OF THE POTOMAC BASIN COMPACT AS AMENDED BY PUBLIC LAW 92-407, 91st CONGRESS, IN SEPTEMBER 1970. IT STATES "THE MONEYS NECESSARY TO FINANCE THE COMMISSION IN THE ADMINISTRATION OF ITS BUSINESS IN THE CONSERVANCY DISTRICT SHALL BE PROVIDED THROUGH APPROPRIATIONS FROM THE SIGNATORY BODIES [THAT IS, DISTRICT OF COLUMBIA, MARYLAND, PENNSYLVANIA, VIRGINIA AND WEST VIRGINIA] AND THE UNITED STATES..." CONGRESS HAS REAFFIRMED ITS ORIGINAL MANDATE BY APPROPRIATING FUNDS TO THE COMMISSION FOR THE FEDERAL SHARE EVERY YEAR BEGINNING WITH FISCAL YEAR 1949.

YOU HAVE OUR DETAILED BUDGET JUSTIFICATION SO I WILL ONLY BRIEFLY HIGHLIGHT THREE MAJOR WORK PROGRAM ITEMS IN THIS SUMMARY STATEMENT.

FIRST IS OUR OPERATIONS CENTER FOR COORDINATED MANAGEMENT OF UPPER POTOMAC BASIN RESERVOIRS AND DOWNSTREAM WATER SUPPLY WITHDRAWALS IN THE NATIONAL CAPITAL REGION. THIS IS ACHIEVED THROUGH OUR COOPERATIVE WATER SUPPLY OPERATIONS SECTION, NOW COMMONLY KNOWN AS CO-OP.

THE COORDINATED MANAGEMENT INCLUDES THE CORPS OF ENGINEERS' RESERVOIRS IN THE POTOMAC NORTH BRANCH SUB-BASIN IN MARYLAND AND WEST VIRGINIA. THEY ARE THE NEW BLOOMINGTON LAKE, WHICH WAS DEDICATED LAST SEPTEMBER, AND THE OLDER SAVAGE RIVER RESERVOIR. THE DOWNSTREAM WATER SUPPLY SYSTEMS INVOLVED SERVE ALMOST ALL OF THE POPULATION IN THE NATIONAL CAPITAL REGION FROM THEIR POTOMAC RIVER INTAKES AND LOCAL RESERVOIRS. CO-OP HAS DEVELOPED AND WILL CONTINUE TO OPERATE THE COMPUTERIZED ANALYTICAL PROGRAMS FOR THESE COOPERATIVE OPERATIONS TO ASSURE WATER SUPPLY RELIABILITY FOR THE NEXT FIFTY YEARS, MAINTENANCE OF STREAMFLOW FOR PROTECTION OF WATER QUALITY AND AQUATIC LIFE, AND MAXIMIZATION OF OTHER RESERVOIR PURPOSES SUCH AS RECREATION AND FLOOD CONTROL. THIS HAS ELIMINATED THE NEED FOR CONSTRUCTION OF ADDITIONAL RESERVOIR STORAGE IN THE UPPER POTOMAC BASIN UNTIL WELL AFTER THE YEAR 2000, THUS SAVING AN ESTIMATED $250 MILLION AS PROPOSED IN EARLIER PLANS. IT ALSO WILL ELIMINATE SOME POLITICAL PROBLEMS FOR THE CONGRESS OVER SITING OF DAMS.

SECOND, IS OUR DEVELOPMENT AND MAINTENANCE OF A TOXIC SUBSTANCE SPILL MODEL FOR THE POTOMAC AND MAJOR TRIBUTARIES AS AN EARLY WARNING SYSTEM FOR WATER SUPPLY INTAKES. IT WILL PROVIDE AN ADDED MEASURE OF SAFETY FOR DRINKING WATER SYSTEMS SERVING AROUND TWO MILLION PEOPLE IN THE WASHINGTON AREA. WITH THE HELP OF THE USGS, THE MODEL OF THE MAIN STEM FROM CUMBERLAND, MARYLAND, TO THE NATIONAL CAPITAL REGION WILL BE OPERATIONAL THIS YEAR. WE EXPECT TO EXTEND THE MODEL UPSTREAM AND TO INCLUDE THE POTOMAC SOUTH BRANCH, SHENANDOAH AND MONACACY TRIBUTARIES AS SOON AS THE NECESSARY FIELD STUDIES CAN BE ACCOMPLISHED.

THIS ACTIVITY IS A PART OF OUR CONTINUED WATER QUALITY MONITORING AND STANDARDS COORDINATION THROUGH AN INTERSTATE TASK

FORCE OF STATE AND FEDERAL REPRESENTATIVES. THE LATTER ALSO INCLUDES ASSESSMENT AND REPORTING ON WATER QUALITY TRENDS AND PROGRESS IN THE BASIN TOWARDS MEETING FEDERAL CLEAN WATER ACT GOALS FOR 1983 AND BEYOND. GOOD WATER QUALITY INFORMATION HELPS DECISIONMAKERS AND TAXPAYERS JUDGE THE RESULTS BEING ACHIEVED WITH LIMITED POLLUTION CONTROL DOLLARS.

LAST BUT NOT LEAST IS OUR OPERATION OF A POTOMAC BASIN PUBLIC EDUCATION AND INFORMATION CENTER. OUR MONTHLY POTOMAC BASIN REPORTER FOCUSES ON PROGRESS AND PROBLEMS WITH WATER QUALITY AND WATER RESOURCES PROGRAMS OF FEDERAL, STATE AND LOCAL AGENCIES. IT AND OUR OTHER PUBLICATIONS PROVIDE TECHNICAL AND NONTECHNICAL INFORMATION EXCHANGE AMONG THE AGENCIES AND THE PUBLIC TO FACILIATE EFFECTIVE PUBLIC PARTICIPATION IN THEIR DECISION-MAKING. WE ALSO PROVIDE OTHER INFORMATION MATERIALS AND INQUIRY RESPONSES TO PUBLIC AGENCIES, CITIZENS ORGANIZATIONS AND NEWS MEDIA BY STAFF AND OUR SMALL LIBRARY OF TECHNICAL AND GENERAL REFERENCE DOCUMENTS. IT IS THE MOST COMPLETE AVAILABLE COLLECTION OF SUCH DOCUMENTS SPECIFICALLY RELATED TO THE POTOMAC BASIN. WITH BOTH STATES AND FEDERAL GOVERNMENT TRYING TO DO MORE WITH LESS, INFORMATION EXCHANGE WILL BE NEEDED MORE THAN EVER AS A WAY OF TIGHTENING COORDINATION AMONG PROGRAMS.

ICPRB PLAYS A UNIQUE INTERGOVERNMENTAL ROLE IN THE POTOMAC BASIN. IT HAS PUT FEDERALISM INTO CONCRETE--AND SUCCESSFUL--PRACTICE FOR 40 YEARS. WITHOUT FEDERAL PARTICIPATION, THERE WILL BE AN EMPTY PLACE AT THE TABLE. FEDERAL PARTICIPATION ENHANCES EFFICIENCY AND EFFECTIVENESS OF THE ESSENTIAL LOCAL-STATE-FEDERAL RELATIONSHIPS SO VITAL TO THE NATIONAL CAPITAL AND OTHER NATIONAL INTERESTS IN THE BASIN. I FEEL STRONGLY THAT THE BENEFITS TO THE FEDERAL GOVERNMENT FAR EXCEED THE COST OF THE $65,600 APPROPRIATION WHICH WE ARE REQUESTING.

THANK YOU AGAIN FOR THE OPPORTUNITY TO TESTIFY, AND NOW MR. EASTMAN AND I WILL BE HAPPY TO ANSWER YOUR QUESTIONS.

LETTER FROM PAUL W. EASTMAN, EXECUTIVE DIRECTOR, INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

February 18, 1982

Dear Chairman Hatfield:

As requested, I am sending you the enclosed 20 copies of the Fiscal Year 1983 budget justification for the Interstate Commission on the Potomac River Basin (ICPRB). The President's FY 1983 budget released February 8 recommends no appropriation for ICPRB. ICPRB requested $65,600 as the fair federal share of the total ICPRB FY 1983 budget of $584,000 approved by the ICPRB Commissioners, including the three Presidentially-appointed Commissioners.

The authority for the Federal Government appropriations to ICPRB is Article IV of the Potomac Basin Compact as amended by Public Law 91-407, 91st Congress, approved September 25, 1970 (80 Stat. 856). It states, "The moneys necessary to finance the Commission in the administration of its business in the Conservancy District shall be provided through appropriations from the signatory bodies [DC, MD, PA, VA and WV] and the United States..." Congress has appropriated funds to the Commission for the federal share every year beginning with FY 1949.

ICPRB's Cooperative Water Supply Operations Section (CO-OP) is an example of the value of ICPRB to the National Capital. ICPRB CO-OP has developed and will continue to operate the computerized analytical programs for cooperative operations of reservoirs and water supply withdrawals of local and state governments and the Corps of Engineers. This will assure water supply reliability for the National Capital region well beyond the year 2000, maintenance of streamflows to protect water quality and aquatic ecosystems, and maximization of other reservoir purposes, i.e., recreation and flood control. ICPRB CO-OP's operations thus eliminate the need in the near future for construction of additional reservoir storage in the upper Potomac basin, a saving of an estimated $250 million as proposed in earlier plans.

The federal and state commissioners recommend that the full formula share of $65,600 is justified as a fair and reasonable U.S. Government appropriation to the ICPRB for FY 1983.

Sincerely yours,

Paul Eastman

Paul W. Eastman, P.E.
Executive Director

February 1982

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN (ICPRB)
Budget Justification
Fiscal Year 1983

General

ICPRB's authority for interstate coordination of water related activities of federal, state, local and private agencies and interest groups is contained in the original 1940 Potomac Interstate Compact, the scope of which was widened in amendments ratified by the states and approved by Congress in 1970.1/

The authority for the federal government appropriations to ICPRB is in Article IV of the compact. It states, "The moneys necessary to finance the Commission in the administration of its business in the Conservancy District shall be provided through appropriations from the signatory bodies [DC, MD, PA, VA and WV] and the United States..." Congress has appropriated funds to the Commission for the federal share each year beginning with FY 1949.

Competition for water and related land resources in the Potomac basin has increased not only because of population and economic growth, but also due to even greater growth in recreational pressures and recurring droughts. The 1977 and 1980-81 droughts, for example, were especially severe in parts of the Potomac basin. Analysis of flow records shows that such droughts may recur with increasing frequency as weather patterns and land use change.2/ Thus the quality and quantity of both surface and groundwater within the basin become increasingly strained to meet the sometimes conflicting demands of municipal, agricultural, industrial and recreational users in the five states of the basin.3/

The need for interstate coordination also is growing with the shift of responsibility for water quality and other water resources programs to the states under the new federal government administration policies. Closer liaison and compatible programs for solving problems involving shared water and related resources within the Potomac basin can increase efficiency and help absorb the impact of the shift.

Program Elements

1. Water Quality Monitoring Evaluation and Assistance

a. Coordination of the Potomac basin surface water quality monitoring and standards programs by means of an interstate task group of state and federal agency representatives together with the evaluation and reporting of water quality status and trends for 1982-83 similar to previous evaluations such as that published for 1978-794/ and being prepared for 1981-82; also evaluation and reporting of progress towards achieving the 1983 and beyond goals and objectives of the Federal Clean Water Act within the basin. ICPRB also will prepare (DC) or provide Potomac basin material (MD, PA, VA & WV) for the biennial state water quality reports as required under Section 305(b) of the Clean Water Act. These kinds of activities are major elements of ICPRB's continuing program responsibilities under the interstate compact.

b. Based on the USGS-ICPRB time-of-particle travel study of the Potomac from Cumberland, MD, to the Metro Washington Area, ICPRB will program for its computer and operate a toxic substance spill model as an early warning system for water supply intakes. The model will be extended to include major tributaries (Potomac North and South Branches, Shenandoah and Monocacy Rivers) as soon as possible in FY 1983 and beyond.

2. Basin and Interstate Planning Coordination and Assistance

a. Coordination of the use by local, state and federal agencies of the Potomac River and related reservoirs for water supply. This eliminates the need in the near future for expenditure of millions of dollars for construction of previously proposed additional storage reservoirs in the upper basin. The new ICPRB CO-OP Section (Cooperative Water Supply Operations on the Potomac) is the center for coordinating water supply operations of the Metro Washington utilities [Washington Suburban Sanitary Commission (MD) and the Fairfax County Water Authority (VA)], the District of Columbia, the Potomac main stem riparian states of Maryland, Virginia and West Virginia, and the Corps of Engineers' Baltimore District, which is responsible for the operation of the Savage River Reservoir and the new Bloomington Reservoir in the Potomac North Branch sub-basin in Maryland and West Virginia.

ICPRB CO-OP has developed and operates the computerized analytical programs for coordinated management to assure water supply reliability well beyond the year 2000, maintenance of flows to protect water quality and aquatic ecosystems, and maximization of benefits to other reservoir purposes, i.e., recreation and flood control.[5]

Based on river flow and water use simulation studies, CO-OP has developed operating rules so that projected water needs for the next fifty years in the Metro Washington area can be supplied from existing reservoirs and anticipated Potomac flows. CO-OP and the National Weather Service will be continuing the operation and improvement of the precipitation-runoff forecasting model for the basin to further improve the reservoir and river withdrawal operations capability.

b. Completion of a project started in 1981 to determine the likelihood of increased water supply requirements for supplemental irrigation of agricultural crops and the possible impact on low streamflows and other downstream water uses. This includes evaluation of the economics of supplemental irrigation as a function of product prices and equipment costs, and assessment of the impact on streamflow, groundwater levels and downstream water uses. The Shenandoah sub-basin in Virginia and West Virginia is the area being studied with the cooperation and assistance of the U.S. Department of Agriculture and state and local organizations.

c. Continuation of basin-wide coordination of, and assistance with implementation and up-dating of state water quality management plans required under the Federal Clean Water Act.[6]

d. Assistance with water related recreation planning, coordinating with local and regional planning councils, state natural resources and outdoor recreation planning agencies, and the National Park Service. It involves, for example, wild and scenic rivers studies of the Cacapon River and other stream segments in the basin and Washington Area Waterfront Action Group projects to promote appropriate utilization of the Potomac waterfront to realize benefits of improved water quality.

3. Project Support

Continuing assistance with implementation of major water and land resource conservation projects and research of interstate significance (e.g., abandoned mine reclamation and acid mine drainage control projects in the Potomac North Branch sub-basin of Maryland and West Virginia and State Water Resources Research Center programs).

4. Public Education and Information

a. Publication of ten editions of the Potomac Basin Reporter, six to eight pages reaching a minimum of 15,000 agency officials and citizens, focused on water quality and water resources problems and programs in the basin to provide an information exchange among official agencies and to enable the public to participate effectively in federal and state agency decision-making; also production of special information materials[7,8] and provision of ad hoc responses to inquiries from individual, non-governmental organizations and citizens' groups, numbering several hundred each year, many of which are referred by state and federal agencies.

b. Organization and conduct of public meetings[9,10], and lectures and visual-aided presentations at nongovernmental organization meetings, schools and colleges throughout the basin.

c. Maintenance of a library of historic and current Potomac basin information materials, telephone information files, educational slides and movie films and other visual aid materials for use by schools and other public entities; also preparation of new materials as needed (e.g., 25-minute documentary movie film on the Potomac River and its uses, produced by D.C. and ICPRB in 1978-79).

d. Publication of issue papers for the lay public summarizing facts and opinions concerning controversial water-related issues in the basin.[11]

e. Continuation of program to promote more information media coverage of water-related problems and programs, especially among media outlets in the smaller cities and towns in the basin.

Tables showing actual, budgeted, and proposed contributions and expenditures for fiscal years 1981, 1982, and 1983, respectively, are attached.

FOOTNOTES

1/Public Law 91-407, 91st Congress, approved Sept. 25, 1970 (80 Stat. 856), amending Public Resolution 93, 79th Congress, approved July 11, 1940 (54 Stat. 748).

2/Drier Skies in the Future, Business Review of Washington, May 8, 1981.

3/State of the Potomac, Issues for the 1980's, ICPRB Gen. Pub. 81-1, May 1981.

4/Potomac River Basin Water Quality 1978-79, ICPRB Tech. Pub. 80-1, June 1980.

5/CO-OP, Section on Cooperative Water Supply Operations on the Potomac, ICPRB, May 1981.

6/208 Planning in the Potomac River Basin: The Key to the Clean Water Act or More Plans for the Shelf, ICPRB Dec. 1979.

7/The State of the Potomac, an information map and poster, ICPRB Gen. Pub. 80-2, June 1980.

8/Potomac Metro Washington Water Quality and Water Use information map and poster (in preparation).

9/The State of the Potomac: Issues for the 1980's, a report on the 1980 Annual Fall Public Meeting, ICPRB Gen. Pub. 81-1, May 1981 (with 29 supplementary papers by meeting participants).

10/The Challenge of the Potomac North Branch, New Source of Water Supply and Old Source of Acid Mine Drainage, a report on the 1981 Annual Fall Public Meeting, (in preparation).

11/Protection of Ground Water Quality, ICPRB Issues Paper, (in preparation).

Table 1

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

Proposed Expenditure Budget for Fiscal Year 1983

(Including actual and budgeted amounts for FY 1981 and FY 1982)

Major Expenditure Categories[1/]	Actual FY 1981	Budgeted FY 1982	Proposed FY 1983
Personnel Salaries and Benefits	$411,800	$442,000	$471,000[2/]
Rent, Office Expense, Travel, etc.	75,500	76,000	84,000
CO-OP Section Computer Equip.	2,900	31,000	3,000
Publications	16,700	36,000	26,000
Consultants	2,200	1,000	-0-
USGS Toxics Travel Time Study	22,500		
Johns Hopkins Univ. Reservoir Operations Study	27,300		
Total Budget	$558,900	$586,000	$584,000[3/]
Total Staff	14.5	14.5	14.5

[1/] Includes expenditures of Section on Cooperative Water Supply Operations on the Potomac (CO-OP Section) organized under Article III of the Potomac Compact.

[2/] Increases in salaries and benefits estimated for FY 1982 and FY 1983 allow for in-grade increases plus 5% each year to maintain comparability with expected Federal Civil Service salary and benefits schedules.

[3/] Income ($507,000) is less than anticipated expenditures ($584,000) by $77,000. This deficit and the elimination of necessary minimum carryover reserve ($20,000) are due to elimination of direct U.S. appropriation ($65,600 requested) and reduction of USEPA Clean Water Act program grant by 21% ($32,000 for ICPRB) according to President's budget released 2/8/82.

Table 2

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN
Proposed Contributions for Fiscal Year 1983
(Including actual and budgeted amounts for FY 1981 & FY 1982)

Source*	Actual FY 1981	Budgeted FY 1982	Proposed FY 1983
Signatory States			
District of Columbia	$ 35,700	$ 35,700	$ 37,700
Maryland	55,200	55,200	58,200
Pennsylvania	17,000	17,000	17,900
Virginia	59,350 1/	62,200	65,600
West Virginia	12,450 2/	12,450 2/	22,600
States Subtotal	$179,700	$182,550	$202,000
Direct U.S. Appropriation	55,000 3/	55,000 3/	-0- 4/
USEPA Annual Program Grant Under Sec. 106, Fed. Clean Water Act	150,000	150,000	118,000
CO-OP Section Special Project Contribution 5/	112,900	165,000	153,000
Other Sources (Interest, Pub. sales, contract, etc.)	40,900	8,000	10,000
Carry-over reserve from previous year	70,000	49,600	24,000
TOTAL	$608,500	$610,150	$507,000 6/

*The compact establishing the Commission specifies that it shall be financed "by appropriations from the signatory bodies and the United States." According to the compact, pro rata state contributions are based on relative population within the basin and a flat service charge. The fair share contribution of the United States has been agreed to be equal to the largest of the state contributions due to the impact of the National Capital and the special interest of the U.S. Government in the Potomac basin. Proposed increase in State and Federal contributions for FY 1983 is approximately 5.5%.

1/ Amount appropriated by Virginia legislature. State share requested was $62,200.

2/ Amount appropriated by West Virginia legislature. State share requested was $21,400.

3/ Amount appropriated by the U.S. Congress; Federal share requested was $62,000.

4/ Amount recommended in President's budget. Federal share requested was $65,600.

5/ Primarily from Washington Suburban Sanitary Commission (MD), Fairfax County Water Authority (VA), Dept. of Environmental Services (DC);

6/ Income ($507,000) is less than anticipated expenditures ($584,000) by $77,000. This deficit and the elimination of necessary minimum carryover reserve ($20,000) are due to elimination of direct U.S. appropriation ($65,600 requested) and reduction of USEPA Clean Water Act program grant by 21% ($32,000 for ICPRB) according to President's budget released 2/8/82.

September 1981

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

SUMMARY OF ACCOMPLISHMENTS
Fiscal Year 1981 (October 1, 1980-September 30, 1981)

Water Quality Monitoring Evaluation and Assistance

- Continued supervision and maintenance of ICPRB's Potomac Baseline Water Quality Monitoring Network throughout the year and started compilation of data and other information for the biennial Potomac basin water quality report for 1980-81; also started gathering information for inclusion in basin state biennial water quality program status reports (Sec. 305(b), Federal Clean Water Act), initially for the Maryland Department of Health and Mental Hygiene, Office of Environmental Programs.

- Began storing water quality data in EPA's STORET data system for the D.C. Department of Environmental Services. Over 90 new stations were established in STORET to receive the past four years of data from Potomac River transect monitoring stations. Data entry began in February, 1981, and by September 30 approximately 30,000 data values had been entered in STORET.

- Conducted a water quality data retrieval and automatic digital plotting demonstration for staff members of the Virginia State Water Control Board's Northern Regional Office and subsequently produced a collection of 56 graphs depicting the trend in pH, dissolved oxygen, water temperature and fecal coliform bacteria for the 1980 monitoring year. These graphs, completed in one week, were used by Northern Regional Office staff in preparing an evaluation of water quality in their region, and would normally have taken the entire summ to prepare.

- Advised the Virginia State Water Control Board concerning management of water data from stream monitoring stations, water treatment plants and wastewater treatment plants in the Northern Region and developed a format for station identification information which was entered into STORET by summer interns working for the Northern Regional Office.

- Planned and held a Water Quality Management Workshop for Potomac basin agencies on June 24-25, 1981. The workshop was a continuation of ICPRB's coordination of water quality monitoring and standards throughout the basin. A summary of the presentations and discussions is being prepared for publication by the end of 1981.

- Evaluated the tradeoff between water quality as degraded by acid mine drainage and flow in the Potomac North Branch below Bloomington Reservoir at Luke, Md. Evaluation of available data indicates that the Upper Potomac River Commission (UPRC) wastewater treatment plant at Westernport, which serves the Westvaco

Corporation paper mill and surrounding communities, exerts a substantial neutralization effect on the river. Recent analysis of the effluent from that plant by ICPRB confirms the existence of approximately the same buffering capacity in the effluent as is apparent in the river. The buffer is bicarbonate, and the reason for its presence is unknown but is under investigation at this time. A simulation of operation of the reservoirs (Bloomington and Savage) for acid control has been completed during the summer of 1981, and analysis using this model will begin in the fall. With the early closing of the Bloomington Dam in July, 1981, the Corps of Engineers has been gaining operational experience with meeting water quality standards below the UPRC wastewater treatment plant. All signs point to a reasonable resolution of any conflicts between water supply and water quality control using Bloomington Reservoir.

- Started development of a toxic substance spill model for the Potomac River above Washington as the result of a spill of aniline which threatened the river at Hancock, Md., in June 1981. At the request of ICPRB, the U.S. Geological Survey (USGS) in Towson, Md., developed a proposal for the field work required to supplement existing data in calibrating a model. The cost of the proposal is $45,000, of which USGS agreed to pay half if matching funds could be found. The Washington Suburban Sanitary Commission, Fairfax County Water Authority, D.C. Department of Environmental Services, Maryland Water Resources Administration, and Maryland Department of Health, Office of Environmental Programs, have tentatively agreed to contribute one-fifth of the required match, and the USGS will begin work when flows are suitable.

- Provided major assistance to the Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, the Department of Interior, and the D.C. Government in forming a group to coordinate and stimulate the exploitation of improved Potomac water quality with the revitalization of the Washington area waterfront. The volunteer organization, formed in late 1980 with representation by federal, state, local, business and citizens groups is known as the Washington Area Waterfront Action Group (WAWAG). ICPRB chairs the WAWAG Environmental Quality Task Group, and was environmental exhibit coordinator for "The Potomac Awakening" and "Nation's River Fishing Derby," May 13-17, 1981. With sponsorship by WJLA-TV-7, the American Fishing Tackle Manufacturers Association, Schlitz Beer Company, and the cooperation of local, private, public, state and federal agencies, the WAWAG event attracted an estimated 100,000 people and brought the message of a cleaner Potomac River to the people of the area. Prizes were awarded to both adults and children (12 and under) for the largest catches in all species categories (black bass, striped bass, catfish, carp, perch, crappie and sunfishes). ICPRB's efforts through WAWAG also achieved agreement with the D.C. Dept. of Environmental Services and the National Park Service permitting the latter to take down the fifteen

"This Water is a Health Hazard" signs along the river and Washington Channel in West Potomac Park. Also the D.C. Dept. of Environmental Services scheduled a 1981 summer study of potential swimming areas in the Potomac.

Basin and Interstate Planning Assistance

Water Quality

- Completed a study dealing with groundwater quality protection in the Great Valley of the Potomac basin.1/ The publication, produced as a file report, includes background information on geology and hydrology and an overview of existing federal and state regulations concerned with groundwater quality. Analysis of the current programs is presented as are expectations for the future. A "popular-style" abridged version was prepared and will be published later in 1981 for a wider audience than the more detailed technical paper.

- Edited the 33 technical papers in the 300-page publication of the proceedings of the ICPRB symposium on nonpoint pollution control held in June, 1980.2/ The publication, which sold out within two months, is the lengthiest (text) produced by ICPRB to date. The U.S. Department of Interior Office of Water Research and Technology provided copies to all of the state water resources research centers and the National Technical Information Center.

- Completed a compilation of data for major public, private and federal wastewater treatment facilities in the Potomac basin, including comparison of the discharge volume and organic loading for 1969 and 1979. This was used in the ICPRB Fall Public Meeting in St. Mary's City, Md., October 14-15, 1980.

- Continued the municipal wastewater treatment plant sludge management project. Questionnaires have been sent to all major facilities in the basin requesting information on the method of sludge treatment and disposal, as well as current and future sludge production figures.

- Participated in the Policy Advisory Committee (PAC) for the Pennsylvania Comprehensive Water Quality Management Plan (COWAMP) for Study Area 3 which includes the Susquehanna basin and part of the Potomac basin (Adam Co.). The PAC approved the chapter of the plan on evaluation of alternative programs. After public hearings on the recommended plan, it is expected to be certified by the Governor and transmitted to EPA by the spring of 1982. Implementation of a remedial water quality management plan for the Gettysburg area is still delayed by EPA's development of a final environmental impact statement.

- Participated in the Water Resources Planning Board (WRPB) of the Metropolitan Washington Council of Governments and its committees. The WRPB completed the supplement to the initial water quality management plan (208 plan) for the metro area during the year and completed much of the cooperative modeling development work which will lead to re-evaluation of waste load allocations during the next fiscal year.

- Prepared an evaluation and report on proposed shipment of sludge from Washington, D.C., via the Potomac estuary to South America.[3]

Other Water Resources

- Continued support of the ICPRB Section on Cooperative Water Supply Operations on the Potomac (CO-OP), the accomplishments of which are covered in a separate report.

- Began research and data collection for the project dealing with feasibility of increased agricultural irrigation and the impacts on downstream users. Contacts have been made with the following: Cooperative Extension Service (Blacksburg, Va.); Agricultural Engineering Department of the Virginia Polytechnic and State University (Blacksburg, Va.); Virginia Crop Reporting Service (Richmond, Va.); ASCS County Office, Clarke County (Berryville, Va.); Lord Fairfax Planning District Commission (Front Royal, Va.) and the National Cartographic Center of the USGS (Reston, Va.).

Public Education and Information

- October, 1980 was proclaimed Potomac River Month by the basin state governors and the mayor of the District of Columbia. A special program was organized with local school children and held at the Great Falls, Virginia park with some Maryland and Virginia county officials. The program was covered by Channel 7 TV (John Harter).

- Held the 1980 fall public meeting, "The State of the Potomac: 1980," in St. Mary's City, Maryland, October 17 and 18, 1980. The meeting took a comprehensive look at the priority issues in the upper, mid and lower portions of the Potomac River basin. Some thirty speakers and approximately 200 people were in attendance.

- Assisted the Army Corps of Engineers (Baltimore District) and Bloomington Dam Committee with planning and promotional activities related to the September 20, 1981, dam dedication.

- Organized, promoted and held the 1981 fall public meeting, "The Challenge of the North Branch," September 19, 1981, in Keyser, West Virginia, to coincide with the Bloomington Dam dedication. The focus of the meeting was on the major upper basin problem of acid mine drainage. Ancillary activities included a field trip to the Upper Potomac River Commission wastewater treatment plant and Westvaco Corporation paper mill, and a banquet in Cumberland, Maryland.

- Completed the fourth year of the River Watch program, which ran from June through the first week in September, 1981. Having determined that radio outreach was more valuable than newspaper coverage, ICPRB concentrated on radio exposure and added four new radio stations to the program.

- Participated in the "Potomac Awakening," a fishing festival sponsored by the new D.C. waterfront group, WAWAG, the American Fisheries Society Conference, and the Chesapeake Bay Program Workshop.

- Prepared a special table-top exhibit, "The Amazing Potomac," for the "Potomac Awakening" and other festivals and meetings.

- As in previous years, continued to show Potomac slide programs and give lectures to local organizations, among them the Rotary Club of Friendship Heights, Friends of Dyke Marsh, the Audubon Society, Potomac Heritage Festival, Commerce-Cities Waterfront program, and Potomac Heritage Days.

- Upgraded media outreach through the organization of an up-dated and expanded media list. In addition to the generous TV coverage by Channel 7 (proclamation of Potomac River Month), several news releases were distributed throughout the year, and radio interviews were held (WWDC and WINX-Washington; WCBC-Cumberland, Md.).

- Staff continued to assist Potomac River researchers, maintained the ICPRB library, and responded to phone requests for information.

Publications

- Published a 300-page technical publication, Nonpoint Pollution Control, in February. This effort, the lengthiest ICPRB publication to date, represents the proceedings of the 1980 agency symposium.

- Nine issues of the Potomac River Basin REPORTER were published, and the mailing list has been gradually shifted (70%) to the ICPRB/CO-OP computer for efficiency and lower distribution costs. An effort has been made to purge the list of obsolete and inaccurate addresses. The REPORTER is distributed free to some 8500 people.

- The State of the Potomac publication, The State of the Potomac: Issues for the 1980's, was published in June, 1981. The 16-page publication represents a new approach to ICPRB meeting proceedings. It is a shorter, more lively designed publication which costs $1.25 as opposed to the "old" version which ran 50 pages or so, and cost $4.50 per copy.

- Comments and recommendations were gathered from various experts in the water quality area for the purpose of assessing the ICPRB biennial water quality technical reports. The assessment will be finalized in the next fiscal year.

- A short publication on ground water in the Great Valley was put in draft form for publication in fiscal 1982.

- Plans for a 1982 publication on the North Branch Potomac and a 1982 poster-brochure on water quality and recreation on the Potomac in the Washington Metropolitan Area were initiated.

- Publications distributed in fiscal 1981 (through September 1): 815 distributed as courtesy copies; 296 were sold. 505 copies of the "Potomac Basin and ICPRB" pamphlet were distributed free. This accounting does not include the REPORTER or the Potomac River & C&O Canal Maps.

- Other publications authored, co-authored or contributed to by staff during the year included:

    - Water Quality and Recreational Opportunities Along the Potomac River in the Vicinity of the District of Columbia, ICPRB, presented at the Annual Meeting of the Potomac Chapter, American Fisheries Society, May 28, 1981.

    - Something's Fishy in the Nation's Capital, ICPRB, with the National Marine Fisheries Service, August 1981.

    - Potomac Tidewater Quality, ICPRB, for the Washington Area Waterfront Action Group, January 27, 1981.

    - Municipal Wastewater Treatment Plant Performance and Lessons from Thomas Crapper, ICPRB, presented at the Virginia Water Pollution Control Ass'n Annual Meeting, April 27, 1981 (scheduled for partial publication by the Water Pollution Control Federation in October 1981).

    - Residual Chlorine in the Potomac Estuary: Problems and Remedies, ICPRB, a supplement to State of the Potomac: Issues for the 1980's, ICPRB Gen. Pub. 81-1, May 1981.

    - Improving Water Quality Criteria and Standards, a summary of a Water Pollution Control Federation (WPCF) position paper prepared by a task force chaired by ICPRB, Jour. WPCF, Vol. 53, April 1981.

    - Water Quality Standards: Directions for the Future, Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), January 1981 (prepared by task force of which ICPRB is a member); also Proposed Revisions of USEPA's Regulation on Water Quality Standards, ASIWPCA, July 1981.

[1] Great Valley Ground Water, ICPRB Tech. Pub. 81-2 May 1981

[2] Nonpoint Pollution Control - Tools and Techniques for the Future, ICPRB Tech. Pub. 81-1, January 1981.

[3] Proposed Shipment of Blue Plains (Wash.,D.C.) Sludge by Stewart Environmental Systems, Inc., to the Stewart Petroleum Co. Storage Facility at Piney Point, Md., and Transshipment to Columbia, South America, ICPRB, June 4, 1981.

[From the Montgomery Journal, Feb. 17, 1982]

POTOMAC SAID CLEANER THAN GAO THINKS

(By Kenneth Weiss, Journal staff writer)

The Potomac River is cleaner than the General Accounting Office believes, according to an interstate advisory commission that has been monitoring the river for 40 years.

The Interstate Commission on the Potomac River Basin, in a letter from its director to the GAO, has taken issue with a recent report in which the congressional watchdog agency contended that a $1 billion, 25-year effort to clean up the Potomac has failed.

Paul Eastman, commission director, contends in his letter that through "selective emphasis, faulty analysis and occasional oversight" the GAO report distorted the total picture and failed to emphasize significant improvements in the river.

The GAO report has left the public with the distorted impression that the Potomac is still dirty, that local government officials have been irresponsible in spending money to clean up the river, and alleged waste of money is unique to this water project.

"For those of us—all levels of government in Maryland, Virginia, and the District of Columbia—actively engaged in the job of bringing the Potomac back to life, these impressions are painful and objectionable since they are not the truth," he wrote.

Efforts to clean the Potomac have drawn national attention since President Johnson called for making the river "a conservation model for our metropolitan area" in his 1965 State of the Union message.

The Washington metropolitan area, so far, has spent or obligated itself to spend $1.05 billion, including $769.7 million in federal funds, to plan and build water treatment plants to curb pollution dumped into the river, according to the GAO report.

In its report, the GAO said that Washington area governments wasted $128.3 million to propose, design or build wastewater treatment facilities which were either not built, not needed or minimally used.

Eastman, however, disagrees with that conclusion. He said yesterday that the GAO used an "either-or" standard of measuring waste so that if part of a project didn't live up to expectations the entire project—and its expenditures—were considered wasted.

"As an example of the distortion of 'waste,' GAO contends that $27.7 million was 'wasted' on the construction of the Dulles interceptor sewer," Eastman wrote.

The sewer, he said, which was built in the 1960s to carry wastewater from the Dulles International Airport and other parts of Northern Virginia to the Blue Plains sewage treatment plant, is only operating at 30 percent capacity. It wasn't a wasted effort because the sewer line will be able to accommodate future wastewater demands, he said.

And, since the major cost of developing the line was the trench digging, he said even if the line had been built smaller, very little money would have been saved.

Eastman acknowledged that in any large project there is going to be some waste, but he said the GAO sidestepped the role the federal government played.

"Part of the difficulties is that EPA has changed its policies in the past 10 years and as a result the state and local governments have had to start over again," he said.

Overall, the report said the Potomac has "cost much more than necessary and achieved much less than desired," which Eastman said left the impression that the Potomac was still as dirty as it used to be.

But the GAO study contrasts markedly with other recent reports citing substantial gains in the Potomac's water quality over the past decade, according to Eastman and other local critics of the GAO.

One recent study, contracted by the EPA, showed that the river has significantly improved in the 10-year span ending in 1979. And, the quality of the river water has improved since then, he said.

Most of the time during dry weather periods the Potomac meets swimming standards and sport fishing is starting to make a comeback. The river is doing very well compared to the "obnoxious growth of algae that used to cover the river for more than a mile" around the Washington area, he said.

But the Potomac doesn't meet all the standards set out during the Johnson years, he admitted. However, there is still work going on improving old and building new facilities at the Blue Plains sewage treatment plant—the main polluter of the Potomac.

Eastman also said it is unfortunate that the negative impact of the report came during a period when federal dollars are increasingly constrained and the future of the public commitment to water quality is uncertain.

He said that the GAO is advocating the shift of responsibility of clean water projects from the federal to regional governments. He said the report was designed to support that goal.

[From the Washington Post, Feb 14, 1982]

NOSE DEEP IN FIGURES, GAO CAN'T SEE THE RIVER FOR THE CESSPOOL

(By Angus Phillips)

Michigan, according to author Jim Harrison in the novel "Warlock," is really two places.

There is the inviting, unspoiled northland, "with its crystalline lakes and streams, small villages pervaded by the scent of pine forests . . ."

And there is the hideous south, a flat nightmare of vast, single-crop agribusiness and factory cities "as dim and blighted in their own way as Calcutta."

The money is in the south, but to live there, writes Harrison, "in terms of quality of life is something like owning the best (skin) diving equipment and only having a cesspool or a mud puddle to swim in."

Living in Washington used to be a little like that. The river that coursed through the Nation's Capital was a cesspool. Twelve years ago, a newcomer to the city, I stood on the banks of the Potomac at Mount Vernon and gazed out on a sea of green slime that stretched two miles to the Maryland shore.

President Lyndon B. Johnson looked at the same slimy sea and did something about it. In 1965, he called for a Potomac cleanup. Long after his death, LBJ's idea has borne fruit.

It took 10 years and cost more than $1 billion but it worked. The Potomac, benefiting from the 1972 Clean Water Act, is unquestionably cleaner today than it was a decade ago.

Now comes a new breed of federal government to report that the Potomac cleanup was too costly, a waste of money. In a 159-page report, the General Accounting Office has concluded that more than $120 million of the $1 billion was wasted and that the cleanup has not done everything it was supposed to do.

The GAO report calls for Congress, when it reviews and revises the Clean Water Act this year, to use the Potomac study as a model. One GAO recommendation is that Congress require all future river cleanup projects to demonstrate a positive cost-benefit ratio before funds are approved. If a cleanup can't yield more dollars than it costs, the GAO report implies, it ought to be scrapped.

This is the type of thinking that produces places like southern Michigan.

The GAO report concedes the improvement in Potomac River quality. Phosphorus and other pollutants declined dramatically. Dissolved oxygen, the lifeblood of a river, is up 10 percent. There are no more green-slime summers.

But the GAO balance-sheet boys nowhere acknowledge that this improvement, which has turned the river into a recreational and esthetic magnet for hundreds of thousands of people, has any value.

The $1 billion spent was almost all for upgrading and expanding sewage treatment facilities. Ten years ago, the river was a fetid stinkhole.

Those days are over. The cleanup worked. If it did not do all it was supposed to, if money was wasted along the way, that's an administrative problem. But it is not a reason to repudiate the entire program.

Says Paul Eastman, head of the Interstate Commission on the Potomac River Basin, "The GAO says about $20 million was wasted because some plans weren't implemented and some designs weren't constructed. That's like saying the Ten Commandments were a waste because we didn't follow them."

The GAO report ignores the single most important benefit of the Potomac River cleanup: the improvement in quality of life for all who are its neighbors and friends.

The report does not mention that five years ago there was a sign, where Rock Creek meets the river, warning against fishing there because of pollution. The sign is gone today. In April, my daughter and I happily pulled one fish after another from a place 10 yards from where the sign stood. We took them home and ate them.

The GAO report nowhere mentions that Washington is the home of the largest canoe club in the nation—the Canoe Cruisers Association—which counts the Potomac within a few miles of downtown as its major recreational outlet.

Perhaps, the accounting wizards are too tired from staring at numbers to glimpse the broad view: the grin of a child catching a shining herring that swam here from the sea; laughter from a family picnic at Hains Point; the hilarity of the annual raft race, where everyone takes a dunking; water-skiers and sailors below Wilson Bridge; kayakers and canoeists above Cabin John Bridge and the throngs at Fletcher's Boathouse when the white perch and striped bass are running.

The Potomac is the people's river. The captains of government and industry have other places to spend their leisure time—places such as northern Michigan, which are unspoiled, so far, by the offal of civilization and big business.

The people just have their backyard, and the stream that runs through it is the Potomac. They've seen what the river can be and are learning to love it. It's inconceivable that anyone will convince them to let the river be destroyed again to save a few pennies on their tax bills.

The government seems bent on repudiating its own success with the Potomac, no doubt so it can divert future cleanup funds to some more "productive" programs.

To the growing legions who use the river and to anyone else who appreciates the simple satisfaction that comes from cleaning up a pigsty, there isn't a more productive program.

LETTER FROM GERALD M. HANSLER, EXECUTIVE DIRECTOR, DELAWARE RIVER BASIN COMMISSION

April 23, 1982

Dear Senator Hatfield:

Final budget resolution by Congress is always a difficult process, but especially this year because of a high projected federal deficit. One sure-fire method of reducing the deficit is by helping the economy which increases federal tax revenues.

Enclosed is Delaware River Basin Commission (DRBC) testimony given before ~~the House~~ Appropriations Committee, Subcommittee on Energy and Water Development. It is self-explanatory as to the economic benefits derived from a viable interstate water resources management agency. Your support in seeking a return of the $42,000 chopped by the Administration from our FY 82 level of $269,000 will be very much appreciated.

Also of great importance to the Delaware Basin States, as well as DRBC, is adequate funding of EPA state and interstate program grants for water pollution control (Section 106 grants). The administration's intent to reduce Section 106 grants of the Clean Water Act by 20 percent from Fy 82 to Fy 83 just doesn't make sense. The U.S. Environmental Protection Agency is delegating more and more "national" programs back to the states. This is reasonable because clearer and quicker decisions concerning water pollution control can better be made at the state level - when a state has developed an adequate control program. However, if their modest federal support is removed, then both state and "national" efforts will crumble.

On behalf of DRBC and its member-states, I urge you to seek funding for the Clean Water Act, Section 106, at the FY 82 level of $51,200,000, and not the proposed and reduced FY 83 level of $40,845,000.

Your assistance is always appreciated.

Sincerely,

Jerry Hansler

Gerald M. Hansler

Honorable Mark O. Hatfield, Chairman
Senate Subcommittee on Energy &
Water Development
1332 Dirksen Senate Office Building
Washington, D. C. 20510

Statement of Gerald M. Hansler, Executive Director, Delaware River Basin Commission

The opportunity to present consensus Commission views on our FY '83 budget is appreciated.

Last year we requested $285,000 as the Federal direct appropriation support for DRBC's FY '82 program. The other signatory parties obligated for FY '82:

Delaware	$138,400
New Jersey	367,700
New York	250,000
Pennsylvania	424,600

New Jersey and Pennsylvania added additional funds for special programs. However, the Federal Government requested only $269,000 -- not the full "fair share" of $285,000 -- and Congress appropriated $269,000 for FY '82.

Our tentative current expense budget for FY '83, including special projects, is as shown below:

Delaware	$149,800
New Jersey	398,000
New York	250,000
Pennsylvania	578,600
Federal Government	269,000
Subtotal	$1,645,400
EPA Grant	216,000
Sale of Publications	5,800
External Funding	18,000
Other Income	40,000
Fund Balance	42,300
	$1,967,500

I emphasize the word "tentative" because as of the January Commission meeting, the latest written indication from the Federal Member as to a Federal "fair share" for FY '83 was $269,000. We now know the figure in the Administration's budget is considerably less--$227,000. Also, we are in the process of negotiating a "fair share" from New York State for our FY '83 budget. And finally, the FY '83 budget is "tentative" because it takes a unanimous vote of the members or their alternates, and as yet we don't have a U. S. Commissioner.

Three states, (Delaware, New Jersey and Pennsylvania), have already agreed to an 8 ½ percent increase in their shares from FY '82 to FY '83. If the Feds supported an 8 ½ percent increase over the $285,000 -- which should have been their fair share last year -- then an amount of $309,000 would be a logical amount for the Federal Government's share for FY '83. But probably recognizing the difficulties regarding the Federal deficit, the Commissioners tentatively agreed to a Federal share of $269,000 -- a $40,000 reduction or 13 percent less than keeping apace with a small, no-growth agency such as the DRBC.

Speaking of deficits and frugality, what are some of the values of DRBC to the Federal Government? For one thing, we pay our bills on time and in full when it comes to reimbursing the Corps of Engineers for water supply storage in Federal projects. We manage the water resources of the basin in a fashion which helps the national economy -- especially during critical periods such as droughts.

During the 1980-81 drought, the DRBC acted to conserve water and use it wisely. Our actions, along with a little rain, obviated the necessity for the Comission to curtail industrial operations in the basin. One resolution passed during our drought emergency dealt with contingency water use cutback plans by major self-supplied water users in the basin.

Some 69 industries responded as to their efforts in water conservation and estimated economic impacts with water use curtailment. They indicated the adverse impact of 10 percent, 25 percent, 35 percent, 50 percent and 100 percent curtailments in consumptive water use if ordered by the Commission. Their figures indicated a combined wage and business loss of about $375,000,000 per month with only a 25 percent cutback in consumptive water use; and an employment loss of 15,500 workers.

If one assumes that a 10 percent Federal income tax would be paid on that $375,000,000, and the curtailment lasted for just one month, then the net loss of tax revenues to the U. S. Treasury would be $37,500,000.

I would certainly hope that this committee realizes the value of our small but effective agency in the scheme of the national economy and water resources management.

Our Federal Member, Secretary James G. Watt, has supported the DRBC -- as far as he can within the Administration budget guidelines. He also stated last year his support of $150,000 in Federal funds to complete our comprehensive ground water study in 1982 (and we did receive the $150,000). His support of DRBC has been and continues to be appreciated. However, I hope this committee and Congress can recognize the value of DRBC; and the fact than an 8 ½ percent increase was not recommended for the Feds in our FY '83 budget. But most of all, I hope the committee will appropriate $269,000, not the $227,000 requested by the Administration, for DRBC's FY '83 programs.

Insofar as other Federal agency appropriations which have a direct bearing on water resource matters in the basin, the Commission supports the following Corps of Engineers line items:

Delaware River Basin Flood Control Study	$185,000
Delaware River Dredging Disposal Study	$100,000
Lehigh River Basin Hydroelectric Power Study	$290,000
Francis Walter Reservoir Modification	$1,100,000
Tamaqua, Pa. Flood Control	$600,000

DELAYS IN ONGOING STUDIES

Chairman HATFIELD. The second question I have relates to your proposal to shorten the planning process for water projects, and I want to compliment you for that.

You indicate you are requesting funds for 13 new studies and funds for 11 advanced planning new starts. As you may know, most of those projects were included in last year's authorization bill, which I sponsored for the Energy Committee.

Now Mr. Secretary, I assume you want to move ahead on these studies and reduce the cost of planning and ultimately the cost of construction. Is that not correct?

Secretary WATT. That is correct.

Chairman HATFIELD. For the same reason, it seems to me we should always be moving as rapidly as possible on ongoing studies and multipurpose hydro facilities. Yet, when I take a closer look at your budget, I notice a number of studies where schedules have slipped. In Oregon, for example, there is at least a 1-year delay in the completion of seven out of nine studies.

Mr. Secretary, I know you had to absorb some reductions last year, and these are rather small items in the budget, but it raises a question in my mind whether you should start new studies when we can't, in a timely manner, finish the work started in prior years. I wish you would take another look at the proposed schedule and let us know, for the record, what Congress can do to help you in your ability to maintain these completion schedules.

I note four of the new studies in the State of Idaho, and I note again that seven of nine studies in the State of Oregon have delays of 1 year or more.

Secretary WATT. It sounds embarrassing right off. [Laughter.]

Chairman HATFIELD. I didn't want to put you on the spot, but——

Secretary WATT. I think I will pull rank and say what is going on, Mr. Commissioner?

Mr. BROADBENT. We have been concerned about that also. We just spent several days out at a planning conference looking at our new studies as well as our ongoing studies. I think there was a reluctance on the part of the Bureau of Reclamation to terminate any of the old studies, not knowing what was happening to the Bureau. I think we were at a point to carry everything on and spread it out to keep our people working and employed. We are now aggressively pursuing every study to try to put it back on track. We are looking at accelerating those studies that are 5 and 6 years long, because we don't see the necessity for lengthy studies. Especially those that have to do with hydropower, we will be looking at trying to move them ahead.

There was a reluctance to move ahead aggressively on the ongoing work because we were afraid our mission was completed. I don't see that attitude any more. We will move aggressively to accomplish what you have said. We will try to move them ahead.

Secretary WATT. I commend you, I was not aware of that, but I think that is an entirely candid answer and fits my understanding of what happened in the past.

Chairman HATFIELD. I appreciate your commitment to accelerating those ongoing studies to get them back on schedule, and I do not suggest to shut down the shop to catch up. But I certainly feel that before we begin a large number of new studies, we ought to apply greater emphasis to the ongoing ones.

Mr. BROADBENT. In our meeting we had last week, we made the people sit down and show how they could complete the ongoing work. We are terminating or looking at terminating some studies that don't look feasible and accelerating some of the others before we take on some of the new work. So we are addressing that. We will provide information on investigations in Oregon for the record.

[The information follows:]

INVESTIGATIONS IN OREGON

We have recently placed more emphasis on our ability to complete investigations as initially scheduled. However, circumstances do arise during the course of the investigation which impact upon completion dates scheduled 2 to 4 years in the future. This was the case with respect to some of the investigations in the State of Oregon.

In the case of the Grande Ronde River basin and Lower Deschutes River basin, both appraisal investigations were extended because delays in the review process of the appraisal report lengthened the required study time. Reports on these investigations are now being released.

The Klamath project, main division A-Canal cross drainage was extended 6 months due to unexpected review time requirements associated with a contract with a consultant to perform work on the study.

The Umatilla basin project and Upper John Day project investigations, each extended 7 months, are unique in that they involve headwater storage sites for improving instream flows for anadromous fishery as well as firming up irrigation water needs. The investigation requires a review of the total basin with respect to rehabilitation for fishery and, as such, involves a large volume of field data collection to define fishery problems, enhancement potential, and extensive plan formulation and public involvement activities related to dam site selection. The process of developing plans to meet identified needs which may not be compatible has necessitated considerably more time than intially anticipated. Further, with respect to the Umatilla basin project, it is necessary to fully involve the Umatilla Indians in the process which has added additional dimensions to the investigation.

The two Rogue River basin project investigations, Grants Pass division and Medford division, have been delayed 1 year each because of special circumstances. Planning on the Grants Pass division was delayed because of a filing by a non-Federal entity for a preliminary permit to study the feasibility of constructing a hydropower facility at Savage Rapids Dam. The problem is twofold: One, the matter of developing plans for fishway improvements to accommodate a potential powerplant of unknown capacity and configuration; and two, the necessity to secure approval of the Oregon State Legislature to study hydropower potential on the Rogue River since such action is now precluded. With regard to the Medford division, preliminary information on a plan to provide irrigation water was provided to local irrigation interests. They are now investigating the potential for proceeding with development of lands in Sams Valley under the small reclamation projects loan program and we are awaiting their decision. If this were to occur, the remaining potential for a Federal reclamation project development is not likely justified.

We are not aware of how Congress can help us maintain the schedules on the studies, since delays involve unanticipated processing problems within Reclamation, additional needed work, or the need for State or local decisions.

QUESTIONS SUBMITTED BY SENATOR DECONCINI

Chairman HATFIELD. Before I forget, Senator DeConcini has submitted some questions for your response.

If there is no objection, they will be made part of the record at this point.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR DECONCINI

CENTRAL ARIZONA PROJECT

Question. Last year your Department requested $186.5 million for Central Arizona Project construction but later revised the request downward by $33.7 million, about 18 percent. The Appropriations Committee did not go along with the second round cuts but enacted an 8-percent cut with the understanding the reduction would be taken from contract slippage.

However, I am now told the CAP funds for fiscal year 1982 will include the same 18-percent cut, the same exact dollar amount, even though contracts have been awarded for the Granite Reef aqueduct. Could you explain?

Answer. In the fiscal year 1982 appropriation, a general reduction of $104.4 million was applied to the construction program. While the fiscal year 1982 reduction was applied uniformly by appropriation, it was impossible to make a uniform application of the construction program reduction among the projects. It was impossible because of commitments for previously awarded contracts, projects being completed in fiscal year 1982 or 1983, and consideration of priority on projects with power development. After taking this into account, the reduction was distributed among various construction projects with the Central Arizona Project receiving a $33.7 million program reduction.

Question. Will these cuts impact entirely on the construction of the Salt-Gila Aqueduct?

Answer. No, the budget cuts also delayed contracts on the transmission facilities into fiscal year 1983.

Question. Do you anticipate delays in delivery of water to the Tucson area?

Answer. Water delivery to the Tucson metropolitan area has been delayed 6 months to late 1988, as a result of the fiscal year 1982 program funding.

NON-INDIAN WATER DISTRIBUTION SYSTEMS

Question. As you know, I am quite concerned that non-Indian water distribution systems will not be in place when CAP water first becomes available in 1985. The committee included language in the fiscal year 1982 bill identifying $2 million of CAP funds for loans to initiate preconstruction activities on the distribution systems. Could you provide a summary of the Bureau's actions in this regard?

Answer. In the testimony leading to the earmarking of $2 million for preconstruction activities on distribution systems, Congress recognized that the fiscal condition of the Federal Government could prevent the funding of new loans. The fiscal situation continues to be constrained, and consequently, no new loans have been approved. Because the conduct of preconstruction work depends upon known approved loans, not much has been accomplished thus far. However, we are doing some preliminary work involving limited land classification, conducting negotiations between Indian and non-Indian irrigation districts for the purpose of developing more efficient water delivery systems, and processing loan applications.

Question. How many loan applications have cleared Reclamation's regional office in Boulder City?

Answer. Our regional office received seven and forwarded one to the Washington office.

Question. How many have been forwarded to the Secretary's office for approval?

Answer. None.

Question. Is there anything which would prevent approval of large loan applications subject to clarification of the so-called $100 million limitation in section 309(b) of the CAP authorizing act?

Answer. Assuming that the appropriation ceiling will not be a factor, there are two steps that must be taken before any of the large loan applications are approved. First, the master water service contract with the Central Arizona Water Conservancy District must be validated. Last of all, negotiations must be successfully concluded on the individual Central Arizona Project water service contracts, followed by the Secretary's required approval.

Question. Could the Bureau recommend any other arrangement or process, in conformity with the intent of Public Law 90-537, by which we might better approach the financing of the distribution systems?

Answer. The Bureau could build the distribution systems with repayment provided under a 9(d) contract with individual districts where the Bureau would plan, design, and construct the facilities. This arrangement would cause a problem because of limited staff capability even with the use of consultants. The same limitations of funding ceiling pertinent to the loan program would still apply.

CENTRAL ARIZONA WATER CONTROL STUDY

Question. Mr. Commissioner, in a November 1981 memorandum to the Commissioner, the Secretary directed the Bureau to prepare an environmental impact statement which would identify the CAWCS plan 6 as the agency proposed action. Could you provide an update on the status of the EIS and an estimate of how and when the Bureau might proceed with the various elements of the plan?

Answer. The draft environmental statement for the Central Arizona water control study is being prepared with an intent to file it later this year. The final environmental statement would be filed in 1983 with initiation of construction possible in 1985 or 1986.

GLEN CANYON DAM

Question. The Bureau has released a draft environmental assessment for Glen Canyon powerplant upratings and is soliciting public comment on a proposal to increase peaking power by the rewinding of generators. Could you please give me an update on the draft proposal?

Answer. On February 9, 1982, the Bureau released the assessment for public review. Due to considerable public interest, we have extended the period for comments an additional 15 days to run through April 3, 1982. Following consideration of the comments, a decision will be made on whether or not an environmental impact statement is necessary for the uprating proposal.

Question. Many individuals have expressed a concern that any power uprating at Glen Canyon could have a significant impact on the ecological makeup of the Grand Canyon. Would you care to comment on this issue?

Answer. The analysis of impacts contained in the environmental assessment indicates that there will be no significant impact on the ecology of the canyon due to the small change in flows resulting from the uprating proposal.

Question. I further understand that the National Park Service has expressed reservations over the proposal and would suggest a full environmental impact statement to be completed prior to any decision to implement a peak power proposal. How would the Bureau respond to this suggestion?

Answer. The Glen Canyon Dam power facilities were designed and are operated as a peaking facility. Our analysis in the environmental assessment of the impacts due to the generator uprating indicates that there will be no significant impacts due to the small incremental change in flows. After consideration of the comments we receive on the environmental assessment, we will make a decision whether an environmental impact statement is needed.

Question. In reference to the draft assessment specifically, do you believe a 30-day public comment period is sufficient to address the far-reaching effects this proposal could have on the other uses of the Colorado River and, of course, the Grand Canyon? Would the Bureau be favorable to extending this period for an additional 30 days?

Answer. In response to the considerable public interest in this proposal, we have extended the comment period an additional 15 days to run through April 3, 1982.

PEAKING POWER

Question. Mr. Commissioner, it was my impression that the Secretary of the Interior scrapped the peaking power plans at the Glen Canyon because of the impact on the Grand Canyon. How does the Bureau's new proposal differ from the original peak power plan?

Answer. The concluded Bureau of Reclamation Glen Canyon peaking power study was related to the possible construction of additional units at the dam to allow a greater peaking power potential. The current proposal involves uprating of the existing generators at Glen Canyon powerplant. It relates primarily to taking advantage of a low-cost opportunity to provide additional capacity and increased flexibility in the operation of the power facilities along with the potential for additional payment to the Upper Colorado River basin fund.

HOOVER POWERPLANT MODIFICATION

Question. Mr. Commissioner, could you please provide me with an update on the Hoover powerplant modification study?

Answer. The regional director's feasibility report has been reviewed by agencies within the Department of the Interior and is being revised. The report and the draft environmental statement are expected to be completed by summer with the draft statement to be filed when the report is released for the 90-day review by Federal, State, and local entities. We are exploring the possibility of having beneficiaries of the proposed new peaking capability provide upfront funding for the additional features with Reclamation constructing and operating the project.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

Chairman HATFIELD. We do have numerous written questions we will place in the record for your response.

Commissioner Broadbent, we have the Department's request to reconsider termination of the Medicine Bow, Second Wind Verification Unit. We have a series of questions on that proposal that we want you to respond to as well. The committee would like to have that data before making a final recommendation.

[The questions and answers follow:]

ADDITIONAL QUESTIONS SUBMITTED BY SENATOR HATFIELD

CABINET COUNCIL ON NATURAL RESOURCES AND ENVIRONMENT

Chairman HATFIELD. Why do you believe that a rather insulated Cabinet level Council on Natural Resources and Environment, working through ad hoc working groups, will be any more effective in bringing about needed changes in water resource investments than past administrations? What provisions are there for congressional and public input?

Secretary WATT. The elevation of water resource matters to the Cabinet level emphasizes the importance this administration attaches to water. The Departments represented on the Cabinet Council and in the Assistant Secretaries working groups are all subject to congressional oversight. Mechanisms for public input are ongoing components of all the agencies involved.

REVIEW OF PRINCIPLES AND STANDARDS FOR WATER RESOURCE PROJECTS

Chairman HATFIELD. I understand the administration is presently reviewing the current principles and standards and will propose changes in the near future. Discuss briefly the nature of the changes being considered. Is legislation required to repeal the existing standards and, if not, what is the specific authority to implement the changes?

Secretary WATT. The administration is proposing the repeal of principles and standards as rules and replacing them with flexible guidelines. Additionally, we propose one objective, national economic development, with environmental quality included as a factor along with regional economic development and other social effects. Public Law

89-80, section 103, designates the Water Resources Council, with the approval of the President, as responsible for principles, standards, and procedures.

WATER POLICY

Chairman HATFIELD. The administration has again proposed abolishing the Water Resources Council, leaving only the Cabinet-level Council which you chair; and a small group under your control for the Interior-related water issues. Under this structure, it appears, Mr. Secretary, that you are the architect of the administration's water policy.

In view of this fact, could you provide for the record a detailed description and breakdown of the personnel by agency, dollars, and percentage of time, et cetera, of all of those connected with the Cabinet Council effort?

Secretary WATT. There is a cooperative effort among the departments and agencies with water resource responsibilities to utilize the Cabinet Council on Natural Resources and the Environment to formulate the administration's water policy. As a representative of only one of the departments in this process, I do not have the detailed information you are requesting for all contributing departments and agencies. I will work with the other Council members and submit the requested information to the subcommittee by May 1, 1982.

[The information follows:]

LETTER FROM J. ROBINSON WEST, ASSISTANT SECRETARY, DEPARTMENT OF THE INTERIOR

JUNE 23, 1982.

Hon. MARK O. HATFIELD,
Chairman, Subcommittee on Energy and Water Development,
Committee on Appropriations,
U.S. Senate, Washington, D.C.

DEAR SENATOR HATFIELD: Following the March 16 Bureau of Reclamation hearing before your subcommittee, we were asked to provide a description of activities and related costs of the Cabinet Council on Natural Resources and the Environment (Council) and its Working Group on Water Policy. We are pleased to provide you the following information in response to your question.

The function of the Council is to serve as a forum for development of administration policies on natural resource and energy issues. The Secretary of the Interior is the Chairman pro tempore of the Council. The Working Group on Water Policy is an ad hoc sub-Cabinet body that undertakes assignments at the direction of the Council. Members of the Working Group include the Assistant Secretary of the Army for Civil Works who serves as Working Group Chairman, Assistant Secretary of Agriculture for Natural Resources and Environment, Assistant Secretary of Housing and Urban Development for Policy Development and Research, Assistant Secretary of the Interior for Land and Water Resources, Assistant Attorney General for Land and Natural Resources, Assistant Secretary of Transportation for Policy and International Affairs, and the Deputy Administrator of the Environmental Protection Agency. Some support to the Working Group and Council is provided by the Office of Management and Budget and the White House Office of Policy Development.

During the past year, most of the work performed by the Council with respect to water policies has centered on developing flexible principles and guidelines for future water project formulation to replace the cumbersome Principles, Standards, and Procedures. The proposed new guidelines were published in the March 22, 1982, Federal Register.

The following table summarizes estimated resource utilization reported by each agency for fiscal year 1982 to support the activities of the Council and Working Group on Water Policy. The staff-year estimates reflect the time invested in participation at Working Group and Council meetings, analysis of proposed policies, and preparation of materials for use by Working Group and Council members. Cost estimates include personnel and office expenses incurred by agency staffs, Working Group, and Council members. I would point out that the work performed in the Cabinet Council and Working Group forums would be carried out by the participating agencies in furtherance of their water resources responsibilities even if the Council did not exist. In fact, by providing such a forum, we are insuring better coordination of and eliminating redundancies in the agencies' efforts.

[Dollars in thousands]

Department/agency	Staff-years	Costs
Department of Agriculture	0.80	$44.2
Department of the Army	.35	22.4
Environmental Protection Agency	.20	9.1
Department of Housing and Urban Development	.23	14.9
Department of the Interior	.22	12.3
Department of Justice	.08	4.5
Office of Management and Budget	.20	8.6
Department of Transportation	.30	17.6

If you require further information, please contact us.

Sincerely,

J. ROBINSON WEST,
Assistant Secretary.

Chairman HATFIELD. What assurances can you give the subcommittee that the work of the Office of Water Policy in the Department of the Interior will deal with Interior-related water issues only?

Secretary WATT. The Office of Water Policy will address water issues that cross agency lines within the Department of the Interior. The staff of this Office will also provide support for the Assistant Secretary, Land and Water Resources, in his capacity as a member of the working group on water resources and provide policy analysis for the Department on a wide range of water resource issues.

CONSTRUCTION NEW STARTS

Chairman HATFIELD. The committee continues to hear that the administration supports new investment in water resource development and has included $48 million in the 1983 budget to begin new projects. Are funds included in the President's budget for new starts and, if so, where?

Secretary WATT. The President's budget contains general language on pages 5–51 and 5–199 about water project new starts but the budget does not contain funds for such projects in fiscal year 1983.

Chairman HATFIELD. If not, what steps will be required so that adequate funding is available for new projects that the administration may propose for initiation?

Secretary WATT. Adequate funding for water project new starts would have to be provided in a fiscal year 1983 budget amendment. The budget amendment would be submitted promptly after criteria for non-Federal financing and cost sharing have been developed and the selection of water projects has been made.

USER FEE (TAX) AND INNOVATIVE FINANCING

Chairman HATFIELD. Mr. Secretary, your statement mentions the low rates paid for the valuable water in the West and that those rates should be revised. Why doesn't the Bureau of Reclamation's budget for fiscal 1983 propose new innovative financing, user tax, and increased water rates similar to some of the major policy changes proposed in the Corps of Engineers' budget for fiscal year 1983? As an example, the cost of recreation facilities associated with the Central Valley project in California is estimated at $202 million, of which $191 million is Federal and $11 million is non-Federal. What actions are currently underway within the Department of the Interior or the Bureau of Reclamation to recover a larger portion of the Federal investment from direct beneficiaries?

Secretary WATT. The Bureau is implementing major policy changes concerning innovative financing and increased water rates. For example, negotiations for water service from the Colorado River storage project, the Fryingpan-Arkansas project, and the Pick-Sloan Missouri basin program will result in some industrial water rates 50 to 400 percent higher than what has been charged previously. Industrial water charges are based on cost to the Treasury of carrying the debt associated with financing the particular project, or are based on the value of the water in its next best alternative use.

The Bureau intends to recover Federal investment faster and the above industrial water ratesetting policies are only the beginning of our new financing and cost recovery efforts.

Repayment of recreation facilities is very limited under current Reclamation authorities. For example, for the Central Valley project, the construction of public recreation facilities associated with New Melones Reservoir is nonreimbursable by law (sec. 203 of Public Law 87-874). Under the authorizing legislation for the Auburn-Folsom South unit, only a limited portion of the construction costs for recreation facilities is reimbursable (sec. 3 of Public Law 89-161). The Federal Water Project Recreation Act (Public Law 89-72, as amended by Public Law 93-251) prescribes recreational and fish and wildlife cost sharing and repayment. The act requires, among other things, that non-Federal entities repay one-half of the separable construction costs allocated to recreation and only the operation, maintenance, and replacement costs attributable to the separable features.

The Department of the Interior is currently leading a cost-sharing subgroup of the Assistant Secretaries Working Group on Water Resources. Within the next few weeks, the proposal of this subgroup will be presented to the Cabinet Council on Natural Resources and Environment. This proposal will encompass Federal and non-Federal cost-sharing guidelines for every major water project purpose. The guidelines are designed to apply uniformly to all water development agencies. The concept of recovering Federal costs from non-Federal user beneficiaries to the maximum reasonable extent is central to the guidelines.

MANETO (SHALLOW BAG) BAY PROJECT, NORTH CAROLINA

Chairman HATFIELD. Secretary Watt, what is the position of the Department of the Interior regarding the Maneto (Shallow Bag) Bay project in North Carolina? Does the Department support the construction of ocean jetties to retard erosion in that area? Please explain.

Secretary WATT. The Department does not support the construction of jetties at Oregon Inlet because the jetties will not retard erosion in the area. In fact, the jetties are designed to arrest the longshore littoral drift process affecting Oregon Inlet so that the littoral material, sand, will not accumulate in the enhanced navigation channel. In the absence of a workable sand bypass system, the jetties pose a major threat to the shoreline dynamics of the adjacent beaches, directly impacting National Wildlife Refuge and National Seashore property. It is the Department's position that the experimental sand bypassing system proposed by the Corps of Engineers does not provide the assurance of littoral drift continuity that is necessary in such a dynamic environment.

Chairman HATFIELD. What is the Department's timetable for finalizing the review and negotiations with the Corps of Engineers on the required permits from DOI?

Secretary WATT. The necessary evaluations have been completed and the decision documents are nearly ready for signature. The documents should be signed and ready for distribution by the end of April.

Chairman HATFIELD. Does DOI support continued maintenance dredging to allow safe access through Oregon Inlet?

Secretary WATT. The Department has been consistent in its support of the Corps in regard to the development and maintenance of a safe navigation channel through Oregon Inlet.

Chairman HATFIELD. Do you think a reasonable solution can be worked out with the Corps? Please explain.

Secretary WATT. The Department, employing expertise from three Interior bureaus and consultants from the private sector, has developed an alternative dredging proposal that is based on a nearshore placement methodology. The proposed dredging alternative is presently being evaluated by the Corps of Engineers. Should the alternative dredging methodology prove to be an effective technique, a safe navigation channel can be maintained without jetty structures and the issues surrounding Interior permits for jetty placement will thus be moot.

GUERNSEY DAM, WYO., MODIFICATION FOR SAFETY

Chairman HATFIELD. The committee is aware that pursuant to the Reclamation Safety of Dams Act, a report on required modifications was developed by the Department and reviewed and concurred with by the Office of Management and Budget.

Now, I understand a funding request proposed by the Bureau of Reclamation to undertake this required safety work has been deleted by the Office of Management and Budget. What was the basis of the Office of Management and Budget's objection to your request for funds?

Mr. BROADBENT. At the insistence of the Office of Management and Budget, funds were not requested for Guernsey Dam modification until amendatory legislation to the Reclamation Safety of Dams Act of 1978 that would require modification costs to be reimbursable by project beneficiaries is considered.

Chairman HATFIELD. Could you provide a fact sheet on this project which shows the nature of the problem and the estimated cost of the modification?

Mr. BROADBENT. Yes; we can provide a fact sheet on this project.

[The information follows:]

GUERNSEY DAM, WYO.

Guernsey Dam cannot safely pass the current inflow design flood. Although original spillway design capacity is adequate, concrete deterioration has advanced to the point that spillway failure will result if large flood flows are experienced.

Freeze/thaw damage has deteriorated the concrete to the point where flows in excess of 6,000 ft^3/s cause severe erosion. The estimated cost of repair to the north spillway is $2.4 million.

The modification report's 60-day review period in Congress ended December 14, 1981. Final design and award of contract will be made as soon as funds are appropriated.

DAM DATA

Type: Diaphragm hydraulic earthfill.

Total capacity: 45,200 acre-feet at reservoir elevation 4,420.0.

Spillway type: Single stoney gate main spillway with top of the gate at elevation 4,420.0. Emergency spillway is the morning glory type with 2 drum gates; top of gates is 4,420.0.

Spillway capacity: Main, 52,000 ft^3/s, and emergency, 30,000 ft^3/s.

MEDICINE BOW SECOND WIND VERIFICATION UNIT, WYOMING

Chairman HATFIELD. The committee has received the Department's request that reconsideration be given to the congressional decision to terminate work on a second verification unit at Medicine Bow, Wyo. Please provide a detailed budgetary history on an annual basis, including estimated costs and any increases in this effort, particularly the written justification submitted explaining the need for wind verification equipment; and how the annual justification and testimony compare, when the study was initiated with the current proposal you have presented.

Mr. BROADBENT. We would like to provide that information for the record.

[The information follows:]

BUDGET HISTORY OF WIND ENERGY PROGRAM

Fiscal year	Total estimated cost	Funds requested	Funds available 1/
1978			
Wind-hydroelectric Study	—	—	$ 250,000 2/
1979			
Wind-hydroelectric Energy Project	$1,000,000	$284,000	2,784,000
Study	(1,000,000)	(284,000)	(284,000)
System Verification Installation	—	—	(2,500,000) 2/

1/Includes funds appropriated, prior year carryover, reprograming and application of payraise.
2/Congressional write in.

Justification -- This investigation will study the feasibility of large scale development of wind turbine generators in an isolated area in southern Wyoming. This would consider the construction of a wind turbine generator farm with up to 50 units. The study will involve the integration of wind power with the Colorado River Storage Project (CRSP) hydroelectric system to produce marketable peaking capacity with energy to conserve oil and relieve critical power shortages in the mid-1980's. In addition, this integration will help to optimize the utilization of the existing capacity in the hydro system. Environmental and socioeconomic conditions and impacts associated with large numbers of wind turbine generators will be investigated. Power market analysis would be coordinated with local electric utilities. The effect of the integration on the hydroelectric system would be evaluated. An instrumentation tower and low level towers for measuring wind conditions will be constructed in fiscal year 1978. A system verification complex is considered a part of the Wind Energy Project. The study was initiated in fiscal year 1978 and scheduled for completion in fiscal year 1982.

Testimony before the Senate Subcommittee (pages 1093, 1094, and 1125, part 3) on April 20, 1978, indicated that the Congress added $250,000 in fiscal year 1978 to inititate a study of the potential for integrating wind energy facilities with hydroelectric power facilities. Reclamation also testified that it had additional capability to utilize $2.5 million to initiate construction of a system verification unit estimated to cost $8 million. Congress added the $2.5 million to the FY 1979 budget request.

Fiscal year	Total estimated cost	Funds requested	Funds available 1/
1980			
Wind-hydroelectric Energy Project	9,127,836	5,946,000	4,546,000
Study	(1,127,836)	(446,000)	(506,000)
System Verification Installation	(8,000,000)	(5,500,000)	(4,040,000)

1/Includes funds appropriated, prior year carryover, reprograming and application of payraise.

The total estimated cost has increased $8,127,836 which consists of $8,000,000 for the construction of the System Verification Unit and $127,836 for the October 1977 pay raise (Executive Order 12010) and to accommodate increased field level transfer funding for environmental studies.

Justification -- A System Verification Unit (SVU) installation is scheduled for initiation in fiscal year 1979 and completion in fiscal year 1980. The system verification installation will include design, construction, and test operation of a large capacity ±2MW wind turbine unit, with an interconnected hydroelectric system and appurtenant monitoring and test equipment. A tower will be constructed approximately 150 feet high with a 200-foot-diameter rotor. The installation of a system verification wind turbine unit is extremely important to verify that coordination of the wind and hydroelectric systems could be accomplished and in identifying any unforeseen problems that may develop prior to construction of the entire complex.

Testimony before the Senate Subcommittee on March 14, 1979, (pages 1000, 1479, and 1550, part 4) by the Commissioner of Reclamation explained the need for a verification unit and Reclamation's cooperation with NASA in acquiring the unit.

Fiscal year	Total estimated cost	Funds requested	Funds available[1]
1981			
Wind-hydroelectric Energy Project	$13,127,721	$5,113,000	$7,099,000
Study	(1,124,235)	(113,000)	(170,000)
System Verification Installation	(12,003,486)	(5,000,000)	(6,929,000)

[1] Includes funds appropriated, prior year carryover, reprograming and application of payraise.

The total estimated cost increased $3,999,885 due to the delay in procuring the System Verification Installation, a revised estimate based on updated data and extending the program to include operation and maintenance costs of the verification unit.

Justification -- The System Verification Installation will include design, construction, and test operation of a large capacity 1- to 5-megawatt wind turbine unit, with an interconnected hydroelectric system and appurtenant monitoring and test equipment. The installation of a system verification wind turbine unit is extremely important to verify that coordination of the wind and hydroelectric systems could be accomplished and in identifying any unforeseen problems that may develop prior to construction of the entire complex. This portion of the study was scheduled for completion in fiscal year 1980 but has been rescheduled for completion in fiscal year 1983 because of delays in procuring the verification unit.

The Commissioner of Reclamation provided testimony before the Senate Subcommittee on February 25, 1980, (pages 297-298, part 1) regarding the contract award for a 4-megawatt wind turbine which was scheduled for completion in September 1981.

At the recall hearing on July 24, 1980 (pp. 302-304, pt. 6) the Commissioner in response to questions regarding the capability to install a second verification unit, specifically a MOD-2 machine, advised that $2 to 3 million could be utilized and that the unit would cost about $4.7 million.

Fiscal year	Total estimated cost	Funds requested	Funds available[1]
1982			
Wind-hydroelectric Energy Project	$17,427,542	$3,040,000	$2,757,000
Study	(978,208)	—	—
System Verification Installation	(16,449,334)	(3,040,000)	(2,757,000)

[1] Includes funds appropriated, prior year carryover, reprograming and application of payraise.

Justification -- The System Verification Installation will include design, construction, and test operation of a 4-megawatt wind turbine unit built by Hamilton-Standard, with an interconnected hydroelectric system and appurtenant monitoring and test equipment. The installation of a system verification wind turbine unit is extremely important to verify that coordination of the wind and hydroelectric system could be accomplished and in identifying any unforeseen problems that may develop prior to construction of the entire complex. An extensive environmental monitoring program has been initiated to evaluate baseline conditions, construction, and the operational impacts of a field of wind turbines. The total estimated cost increased $4,299,821 due to the addition of a second wind turbine unit. The unit is scheduled for completion in September 1981 with acceptance in November 1981. The unit will be test-operated for 2 years with full operation by the Bureau in fiscal year 1983.

In testimony before the Senate Subcommittee on February 24, 1981, (pages 622-625, part 1) Acting Commissioner Barrett advised that design and installation of the second system verification unit would begin in fiscal year 1981 with most of the work scheduled for accomplishment in fiscal year 1981 and completion in fiscal year 1982, after which monitoring and testing of the unit will then occur.

The need for a second unit was also discussed as well as the coordination of Reclamation's wind studies with those of the Department of Energy.

Fiscal year	Total estimated cost	Funds requested
1983		
Wind-hydroelectric Energy Project	$16,513,349	$1,943,000
Study	(997,269)	—
System Verification Installation	(15,516,080)	(1,943,000)

The decrease of $914,193 in the total estimated cost is due to termination of work on the second system verification unit as directed by Congress.

Justification -- The System Verification Installation will include design, construction, and test operation of a 4-megawatt wind turbine unit built by Hamilton-Standard with an interconnected hydroelectric system and appurtenant monitoring and test equipment. The installation of system verification wind turbine units is extremely important to verify that coordination of the wind and hydroelectric system can be accomplished and in identifying any unforeseen problems that may develop prior to construction of the entire complex. An extensive environmental monitoring program has been started to evaluate baseline conditions, construction, and the operational impacts of a field of wind turbines. Funding is not available in fiscal year 1982 to complete the second system verification unit (Boeing MOD-2 rated at 2.5 megawatts). The unit is completely assembled at the site but acceptance testing is required. If non-Federal funds cannot be arranged to cost-share this testing it will be "mothballed" until a decision is made on its disposition. Work on the Hamilton-Standard unit is scheduled for completion in fiscal year 1983.

Current status

Total estimated cost

Wind-hydroelectric Energy Project	$19,018,000
Study	(998,000)
First System Verification Unit	(13,574,000)
Second System Verification Unit	(4,446,000)

The increase of $1,590,458 in total estimated cost from the fiscal year 1982 justification is due to modifications to the contract for the first system verification unit and a new estimate for the operation of the unit for a 2-year period.

Fiscal year 1982 funding proposal

Funds appropriated	$1,500,000
Prior year carryover funds	1,077,000
Payraise applied	180,000
Subtotal	2,757,000
Funds reprogramed within Department's authority	689,000
Additional reprograming of funds per proposal	440,000
Total funding	3,886,000

Fiscal year 1983 funding proposal

Budget request	1,943,000
Proposed budget adjustment	373,000
Total	2,316,000
Fiscal year 1984 requirement to operate both units through 2-year testing period	1,003,000

The current proposal will provide funding to allow initial rotation of the first System Verification Unit in late fiscal year 1982 and 2 years of operational testing through late fiscal year 1984 at a total estimated cost of $13,574,000 versus $8,000,000 when the proposal was first made in testimony supporting the fiscal year 1979 budget.

COST OF WIND-HYDROELECTRIC ENERGY STUDY

Chairman HATFIELD. Please review the total estimated cost of the wind-hydroelectric energy study from the point of authorization indicating, specifically, the reasons for each annual increase.

Mr. BROADBENT. We will provide this information for the record.

[The information follows:]

For the second system verification unit, the current proposal if reprograming is approved will allow electrical checkout and acceptance testing of the completed Boeing machine this summer at a total estimated cost of $4,446,000 including 2 years of operational testing through most of fiscal year 1984. This compares with an estimate of $4.7 million provided the subcommittee during its recall hearing on the fiscal year 1981 budget when the second unit was initially discussed.

Chronology of annual increases of wind-hydropower study

Budget justification:	Total estimated cost
Fiscal year 1979	$1,000,000
Fiscal year 1980	9,127,836

The total estimated cost increase of $8,127,836 is due to classified pay raise of $56,000, the estimated field level fund transfer of $71,836 to the Fish and Wildlife Service and related environmental studies, and $8,000,000 for the first system verification installation.

Fiscal year 1981	$13,127,721

Total estimated cost increase of $3,999,885 is due to the delay in procuring the system verification installation, revised estimate based on better data, and extending the program to include operation and maintenance costs estimated to be $1 million for fiscal year 1982 and fiscal year 1983.

Fiscal year 1982	$17,427,542

Cost increase of $4,299,821 due to the addition of a second wind turbine unit.

Fiscal year 1983	$16,513,349

Cost decreased due to congressional reduction in fiscal year 1982 associated with the second SVU (Boeing MOD-2 unit).

COST OF SECOND WIND VERIFICATION UNIT

Chairman HATFIELD. What is the current total estimated cost of the second wind verification, the so-called Boeing MOD-2 unit, and what costs have been incurred to date? What is the additional cost that will be incurred by the Federal Government beyond that initially contemplated with a single verification unit?

Mr. BROADBENT. The total estimated cost—direct and indirect—for the Boeing unit, not including the $1.5 million in parts furnished by DOE, is as follows: The Bureau cost through February 1982 is $3,446,000 and the estimated cost to complete the unit is $440,000. The estimated cost for 2 years' operation is $560,000. The total estimated cost through 2 years' operation is $4,446,000.

CONSTRUCTION AUTHORITY

Chairman HATFIELD. The backup material supporting the funding options indicates that the authority to construct this second verification unit was the interdepartmental work provisions of 31 U.S.C. 686. Please supply a copy of this authority for the record and a justification or explanation as to why this authority was used when the congressional budget justification was based on a single verification unit.

Mr. BROADBENT. The Boeing MOD-2 unit opportunity had not yet materialized sufficiently when we prepared our fiscal year 1981 budget justification. On July 24, 1980, at the recall hearing on the fiscal year 1981 budget request before this subcommittee, there was considerable discussion regarding the possibility of installing competing machines, specifically the Boeing MOD-2 unit that was surplus to the Department of Energy's needs.

By late 1980, the Bureau had decided to take advantage of the Boeing MOD-2 opportunity under the interdepartmental work provision of 47 Stat. 31 U.S.C., sec. 686, a copy of which is provided for the record. The Bureau notified Congress of this decision by letter of November 14, 1980, and received no response within 9 weeks. The Bureau interpreted this provision as constituting authority to proceed with what was believed to be an economical and responsible Federal investment.

[The letter follows:]

LETTER FROM R. KEITH HIGGINSON, COMMISSIONER, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

NOV 14 1980

Honorable J. Bennett Johnston
Chairman, Subcommittee on Energy
and Water Development
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Senator Johnston:

The Water and Power Resources Service (Water and Power) plans to initiate work in fiscal year 1981 to enable installation of a second wind turbine unit at Medicine Bow, Wyoming. This work would increase the total estimated cost of the Wind Hydroelectric Energy Project by approximately $4.3 million. Sufficient fiscal year 1981 funds are available in the general investigation appropriation for this activity. Delays in the start of work on the first unit, adjustments in the installation schedule, and other slippage makes this possible. Proceeding with construction and installation of the second unit at Medicine Bow would not cause any delay or jeopardize installation of the first unit.

The National Aeronautics and Space Administration (NASA) through funding from the Department of Energy (DOE) has a contract with the Boeing Company to install up to four MOD-2 wind turbine generator units. NASA and DOE have exercised their option to install three of the four units and offered Water and Power the manufactured spare parts for the fourth unit. The parts would be transferred to Water and Power in exchange for wind data, engineering services, and test data from Water and Power wind energy investigations and from the operation of wind energy units. No exchange of funds would be required for the MOD-2 spare parts.

Installation and operation of the MOD-2 unit would be the second systems verification installation (SVI) at Medicine Bow, Wyoming. It would provide the Federal Government with important side-by-side comparison of two different wind turbine designs. The first SVI will be a Hamilton-Standard unit currently under construction by Water and Power. The Hamilton-Standard unit is scheduled for initial operation by the end of fiscal year 1981 and operational testing during fiscal years 1982 and 1983. The second SVI would be operational in fiscal year 1982. Also, the operation of more than one unit will provide valuable test information on electrical stability and control parameters while both units are in operation, plus providing information on spacing requirements between units. This information will be extremely valuable to assist studies underway for a multiunit wind farm installation near Medicine Bow. In addition, the parts for the MOD-2 unit are immediately available and any delay in commitment could jeopardize their availability to Water and Power. DOE and NASA fully support the installation of the second SVI by Water and Power at Medicine Bow, Wyoming.

An identical letter has been sent to the Chairman, Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives.

Sincerely yours,

[Sgd] R. Keith Higginson

R. Keith Higginson
Commissioner

§ 686. Purchase or manufacture of stores or materials or performance of services by bureau or department for another bureau or department

(a) Any executive department or independent establishment of the Government, or any bureau or office thereof, if funds are available therefor and if it is determined by the head of such executive department, establishment, bureau, or office to be in the interest of the Government so to do, may place orders with any other such department, establishment, bureau, or office for materials, supplies, equipment, work, or services, of any kind that such requisitioned Federal agency may be in a position to supply or equipped to render, and shall pay promptly by check to such Federal agency as may be requisitioned, upon its written request, either in advance or upon the furnishing or performance thereof, all or part of the estimated or actual cost thereof as determined by such department, establishment, bureau, or office as may be requisitioned; but proper adjustments on the basis of the actual cost of the materials, supplies, or equipment furnished, or work or services performed, paid for in advance, shall be made as may be agreed upon by the departments, establishments, bureaus, or offices concerned: *Provided*, That the Department of the Army, Navy Department, Treasury Department, Federal Aviation Administration, and the Federal Maritime Commission may place orders, as provided herein, for materials, supplies, equipment, work, or services, of any kind that any requisitioned Federal Agency may be in a position to supply, or to render or to obtain by contract: *Provided further*, That if such work or services can be as conveniently or more cheaply performed by private agencies such work shall be let by competitive bids to such private agencies. Bills rendered, or requests for advance payments made, pursuant to any such order, shall not be subject to audit or certification in advance of payment.

(b) Amounts paid as provided in subsection (a) of this section shall be credited, (1) in the case of advance payments, to special working funds, or (2) in the case of payments other than advance payments, to the appropriations or funds against which charges have been made pursuant to any such order, except as hereinafter provided. The Secretary of the Treasury shall establish such special working funds as may be necessary to carry out the provisions of this subsection. Such amounts paid shall be available for expenditure in furnishing the materials, supplies, or equipment, or in performing the work or services, or for the objects specified in such appropriations or funds. Where materials, supplies, or equipment are furnished from stocks on hand, the amounts received in payment therefor shall be credited to appropriations or funds, as may be authorized by other law, or, if not so authorized, so as to be available to replace the materials, supplies, or equipment, except that where the head of any such department, establishment, bureau, or office determines that such replacement is not necessary the amounts paid shall be covered into the Treasury as miscellaneous receipts.

(c) Orders placed as provided in subsection (a) of this section shall be considered as obligations upon appropriations in the same manner as orders or contracts placed with private contractors. Advance payments credited to special working funds shall remain available to the procuring agency for entering into contracts and other uses during the fiscal year or years for which the appropriation involved was made and thereafter until said appropriation lapses under the law to the surplus fund of the Treasury.

Mar. 4, 1915, c. 143, § 1, 38 Stat. 1084; May 21, 1920, c. 194, § 7, 41 Stat. 613; June 30, 1932, c. 314, § 601, 47 Stat. 417; June 22, 1936, c. 689, Title IV, § 8, 49 Stat. 1648; July 20, 1942, c. 507, 56 Stat. 661; June 26, 1943, c. 150, § 1, 57 Stat. 219; 1950 Reorg.Plan No. 21, eff. May 24, 1950, 15 F.R. 3178, 64 Stat. 1273; Aug. 23, 1958, Pub.L. 85–726, Title XIV, § 1407, 72 Stat. 808; 1961 Reorg.Plan No. 7, eff. Aug. 12, 1961, 26 F.R. 7315, 75 Stat. 840.

Historical Note

Codification. The Department of War was designated the Department of the Army and the title of the Secretary of War was changed to Secretary of the Army by section 205(a) of Act July 26, 1947, c. 343, Title II, 61 Stat. 501. Section 205(a) of Act July 26, 1947, was repealed by section 53 of Act Aug. 10, 1956, c. 1041, 70A Stat. 641. Section 1 of Act Aug. 10, 1956, enacted "Title 10, Armed Forces" which in sections 3011 to 3013 continued the military Department of the Army under the administrative supervision of a Secretary of the Army.

Provision of subsec. (c), which provided that advance payments credited to a special working fund remain available until expended was eliminated on the basis of section 8 of Act June 22, 1936, which provided advance payments should have no longer period of availability for obligation than the appropriation from which such advance payments are made.

1958 Amendment. Subsec. (a). Pub.L. 85–726 substituted "Federal Aviation Agency" for "Civil Aeronautics Administration".

1943 Amendment. Subsec. (c). Act June 26, 1943 added provisions making advance payments available during years for which appropriation was made.

1942 Amendment. Subsec. (a). Act July 20, 1942 amended subsec. (a) generally and among other changes added first proviso.

1932 Amendment. Act June 30, 1932 amended section generally.

Effective Date of 1958 Amendment. Section 1505(2) of Pub.L. 85–726, Title XV, Aug. 23, 1958, 72 Stat. 810, provided that the amendment of this section by Pub.L. 85–726 shall be effective on the 60th day following the date on which the Administrator of the Federal Aviation Agency [now Administrator of Federal Aviation Administration] first appointed under Pub.L. 85–726 qualifies and takes office. The Administrator was appointed, qualified and took office on October 31, 1958.

Transfer of Functions. "Federal Aviation Administration" has been substituted for "Federal Aviation Agency" pursuant to Pub.L. 89–670, Oct. 15, 1966, 80 Stat. 931, which transferred all functions, powers and duties of the Federal Aviation Agency and of the Administrator and other offices and officers thereof to the Secretary of Transportation, with the functions, powers, and duties of the Secretary of Transportation pertaining to aviation safety to be exercised by the Federal Aviation Administrator in the Department of Transportation. See sections 1652(e)(2), 1655(c) and 1657(f), (g) of Title 49, Transportation.

"Federal Maritime Commission" was substituted for "Federal Maritime Board" in view of 1961 Reorg.Plan No. 7, eff. Aug. 12, 1961, 26 F.R. 7315, 75 Stat. 840, set out in the Appendix to Title 5, Government Organization and Employees, which established the Federal Maritime Commission and abolished the Federal Maritime Board, including the offices of the members thereof, and which transferred functions of the Federal Maritime Board either to the Federal Maritime Commission or to the Secretary of Commerce.

"Federal Maritime Board" was substituted for "Maritime Commission" (meaning the United States Maritime Commission) on the authority of 1950 Reorg.Plan No. 21, eff. May 24, 1950, 15 F.R. 3178, 64 Stat. 1273, set out in the Appendix to Title 5, Government Organization and Employees, which abolished the United States Maritime Commission and tranferred part of its functions and part of the functions of its Chairman to the Federal Maritime Board and the Chairman thereof, such Board having been created by that Plan as an agency within the Department of Commerce with an independent status in some respects, and transferred the remainder of such Commission's functions and the functions of its Chairman to the Secretary of Commerce, with power vested in the Secretary to authorize their performance by the Maritime Administrator, the head of the Maritime Administration, which likewise was established by the Plan in the Department of Commerce with the provision that the chairman of said Federal Maritime Board should, ex officio, be such Administrator.

The functions of all other officers of the Department of Commerce and all functions of all agencies and employees of that Department, were, with a few exceptions, transferred to the Secretary of Commerce, with power vested in him to authorize their performance or the performance of any of his functions by any of those officers, agencies, and employees, by 1950 Reorg. Plan No. 5, §§ 1, 2, eff. May 24, 1950, 15 F.R. 3174, 64 Stat. 1263, set out in the Appendix to Title 5, Government Organization and Employees.

All executive and administrative functions of the Maritime Commission were transferred to the Chairman of the Maritime Commission by 1949 Reorg. Plan No. 6, eff. Aug. 19, 1949, 14 F.R. 5228, 63 Stat. 1069, set out in the Appendix to Title 5, Government Organization and Employees.

The Bureau of Federal Supply was abolished by section 102 of Act June 30, 1949, c. 288, Title I, 63 Stat. 380, and all functions transferred to the Administrator of General Services. See section 752 of Title 40, Public Buildings, Property, and Works.

For transfer of certain procurement and related functions and property, and functions relating to finance and fiscal matters, insofar as they pertain to the Air Force, from the Secretary of the Army and Department of the Army to the Secretary of the Air Force and Department of the Air Force, see Secretary of Defense Transfer Order Nos. 6 [§ 1(a)(34)], eff. Jan. 15, 1948 and 25 [§ 1a], Oct. 14, 1948.

Functions relating to procurement of stores, supplies, etc., exercised by any other agency, transferred to Procurement Division of the Treasury Department by Ex.Ord.No.6166, § 1, eff. June 10, 1933, set out as a note under section 901 of Title 5. Effective Jan. 1, 1947, the name of the Procurement Division of the Treasury Department was changed to the Bureau of Federal Supply by regulation issued by the Secretary of the Treasury under the authority of section 301 of Title 5.

Legislative History. For legislative history and purpose of Pub.L. 85-726, see 1958 U.S.Code Cong. and Adm.News, p. 3741.

Cross References

Orders or contracts for materials placed with government-owned establishments deemed obligations, see section 23 of Title 41, Public Contracts.

Library References

United States ⚷85.

C.J.S. United States § 123.

Code of Federal Regulations

Agency for International Development, training programs, see 15 CFR 40.1 et seq.

Notes of Decisions

Hearings 2
Pro rata interests of agencies 3
Rules and regulations 1
Sale or loan of equipment 4

1. Rules and regulations

General Regulations of the General Accounting Office, which prescribe administrative procedure for adjustments between appropriations and/or funds "for general use through the government service", are held to be invalid because in conflict with provisions of this section. 1934, 37 Opp.Atty.Gen. 559.

2. Hearings

Services rendered by government employees as members of security hearing boards established in accordance with Ex.Ord.No.10450, are not within the contemplation of this section and therefore the appropriations of the agencies for which the hearings are held are not available for reimbursing the appropriations of the agencies furnishing the hearing board members. 32 Comp.Gen. 534 (1953).

3. Pro rata interests of agencies

A facility constructed by one agency for the use of several agencies under the authority in this section is considered the property of all the agencies on a pro rata basis and none of the agencies may limit, restrict, reduce, abridge or encumber in any manner the pro rata interests of the others. 38 Comp.Gen. 36 (1958).

4. Sale or loan of equipment

This section applies only to sales, and not to loans, and hence did not authorize loan of Army equipment to officers of Department of Justice. U. S. v. Banks, D.C.S.D.1974, 383 F.Supp. 368.

Sale and loan of government equipment to Department of Justice to be used in executing laws was not authorized by regulation promulgated under sections 331 to 333 of Title 10, dealing with issuance of presidential proclamation as basis for federal troop intervention in civil law enforcement where no presidential proclamation was involved in case which arose out of Wounded Knee occupation. Id.

§ 686-1. Same; available period of funds withdrawn and credited

No funds withdrawn and credited pursuant to section 686 of this title, shall be available for any period beyond that provided by the Act appropriating such funds.

Sept. 6, 1950, c. 896, c. XII, § 1210, 64 Stat. 765.

Historical Note

Codification. This section consists of a part of section 1210 of the General Appropriation Act, 1951. The remainder of section 1210 is set out as section 628-1 of this title.

§ 686-2. Expenditures for telegraph and telephone communication

The head of any department or establishment of the Government, in his discretion, may transfer in advance to the Signal Corps of the Army, from appropriations available for the transmission of messages such amounts as may be necessary to defray the expense of transmitting messages turned over by him to that corps, including the payment of toll charges of commercial carriers, the leasing of facilities required for transmitting messages, and the installation and maintenance of such facilities.

Apr. 15, 1926, c. 146, 44 Stat. 267.

Historical Note

Codification. This section was formerly classified to section 118 of Title 5 prior to the general revision and enactment of Title 5, Government Organization and Employees, by Pub.L. 89–554, § 1, Sept. 6, 1966, 80 Stat. 378.

§ 686a. Materials or services ordered from Navy; payment

Any executive department or independent establishment of the Government ordering materials or services from the Navy shall pay promptly by check upon written request from the Paymaster General of the Navy, either in advance or upon completion of the work, all or part of the estimated or actual cost thereof, as the case may be, and bills rendered in accordance herewith shall not be subject to audit or certification in advance of payment: *Provided,* That proper adjustments on the basis of the actual cost of delivery of work paid for in advance shall be made.

May 21, 1926, c. 355, 44 Stat. 605.

Code of Federal Regulations

Disposition of property, see 32 CFR 736.1 et seq.

§ 686b. Transfer of funds; convict labor; new provisions as additions to laws relating to working funds

(a) Notwithstanding the provisions of this section and amendment of section 686 of this title, said section 686, as in force prior to June 30, 1932, shall remain in force with respect to the disposition of funds transferred thereunder prior to such date.

(b) Nothing in this section or section 686 of this title shall be construed to authorize any Government department or independent establishment, or any bureau or office thereof, to place any orders for material, supplies, equipment, work, or services to be furnished or performed by convict labor, except as otherwise provided by existing law.

(c) The provisions of this section and section 686 of this title are in addition to and not in substitution for the provisions of any other law relating to working funds.

June 30, 1932, c. 314, § 602, 47 Stat. 418.

§ 686c. Repealed. June 26, 1943, c. 150, § 2, 57 Stat. 219

Historical Note

Section, Act June 22, 1936, c. 689, Title IV, § 8, 49 Stat. 1648, related to availability of advance payments under section 686.

CORRESPONDENCE REGARDING SECOND WIND VERIFICATION UNIT

Chairman **HATFIELD**. Also provide all copies of correspondence and contracts exchanged between DOE, NASA, and Boeing regarding the purchase and installation of the Boeing machine.

Mr. **BROADBENT**. We will provide that information for the record.

[The information follows:]

LETTER FROM MAURICE J. KATZ, ACTING DIRECTOR, OFFICE OF SOLAR POWER APPLICATIONS, CONSERVATION, AND SOLAR ENERGY, DEPARTMENT OF ENERGY

4-21-80

Mr. Donald Beattie
Director of Energy Systems Division
NASA Headquarters RE
Washington, D. C. 20546

Dear Don:

The Department of Interior, Water and Power Resources Service (WPRS) is currently considering expanding its wind energy programs to include fabrication and installation of a Mod-2 wind turbine at Medicine Bow, Wyoming for comparison testing with their planned WTS-3 machine. I favor such a project and believe that the potential resulting industrial competition would be beneficial to the commercialization of wind energy.

With this letter I am setting forth the conditions under which I would authorize the spare parts and materials listed below, purchased under interagency agreement DE-A1-01-79ET20305 for the DOE Mod-2 wind turbine, to be made available to the WPRS Mod-2 machine should WPRS implement a Mod-2 project. In exchange for these parts, WPRS should furnish the DOE wind program with test data and services of comparable value.

The Mod-2 parts may be utilized in the WPRS project only if they are not required for the installation and test of the three DOE machines at Goodnoe Hills. These parts and materials include the rotor, tower, gearbox (Stal-Laval), low speed shaft, quill shaft and couplings, generator, generator accessory unit, low speed and yaw slip rings, yaw bearing, motor, gear box and brakes, low speed shaft bearings, and teeter bearing. It is my understanding that the current market price of these parts, if WPRS were to purchase them individually at this time, is approximately $1.5M.

As you are aware, the primary reason for DOE's purchasing the long lead spare items was to reduce the risk in meeting the installation and operation schedules of the three Mod-2 machines. These parts must be available, if needed, for the installation acceptance tests of the DOE Goodnoe Hills units. We recognize that this requirement could affect the schedule of the WPRS project. NASA Lewis Research Center should develop a schedule showing when each spare or stocked item is no longer required based on the acceptance of the equivalent parts for the three DOE machines. This condition does not preclude the initiation of assembly of those parts into a WPRS machine.

In exchange for the use of the Mod-2 wind turbine spare parts WPRS should provide the DOE wind program with technical data and engineering services of comparable value. This exchange may include comparison test data and engineering data on the WPRS Systems Verification Unit wind turbines, meteorological and wind characteristics from candidate wind turbine sites and other technical services which would otherwise be funded under the DOE program. Details of the exchange should be developed by NASA and coordinated and approved by respective DOE and DOI program offices.

I want to reiterate my support of the Medicine Bow project, and am looking forward to receiving the application test data WPRS will provide NASA and DOE. If I can be of further assistance, please contact me.

Sincerely,

Maurice J. Katz, Acting Director
Office of Solar Power Applications
Conservation and Solar Energy

LETTER FROM DONALD A. BEATTIE, DIRECTOR, ENERGY SYSTEMS DIVISION, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Mr. R. Keith Higginson
Commissioner
Water and Power Resources Service
Department of the Interior
Washington, DC 20240

Dear Mr. Higginson:

Referring to our earlier discussions, we have now received the enclosed letter from the Department of Energy (DOE) which officially makes the spare parts available to the Water and Power Resources Service (Water and Power) for the construction of a Boeing MOD-2 unit as a second SVU Wind Turbine. As indicated, the NASA/Lewis Research Center (LeRC) will develop a schedule showing when the spare parts will be available for assembly into a Water and Power MOD-2 machine and when they would no longer be required to support the installation and acceptance of the three DOE MOD-2 machines at Goodnoe Hills.

Working with Water and Power representatives, LeRC will also develop a plan that identifies the wind data, engineering services, and test data of comparable value which Water and Power would be willing to share with DOE in exchange for the space parts. Details of the schedule and plan will be documented in a letter of understanding to be prepared by NASA and approved by a Water and Power and a DOE representative. Before finalizing these plans, I need your concurrence in a letter of intent which:

1. Confirms your desire to proceed with a Water and Power MOD-2 machine at Medicine Bow and states your intent to request FY 81 funding for this project.

2. Designates the Water and Power representatives who will assist LeRC with the development of details for the schedule and plan in the letter of understanding.

3. Designates yourself or another Water and Power representative who will approve the letter of understanding.

Upon receipt of your letter of intent, LeRC will meet with the Water and Power representatives you designate to work out the details of the letter of understanding, plus details of the MOD-2 SVU configuration. LeRC will then begin negotiations with the Boeing Company for exercising the option in the existing MOD-2 contract. As you know, the option cannot actually be implemented until the required Water and Power funding becomes available. LeRC will also provide recommended amendments to the Interagency Agreement 9-07-70-X0123 and to the SVU Project Plan to reflect the addition of a MOD-2 SVU machine.

In order to be in a position to exercise the MOD-2 contract option early in FY 81 and to achieve first rotation of a MOD-2 SVU at Medicine Bow by September of 1981, we will need to meet the milestones shown on the enclosed schedule.

I remain convinced that modification of the SVU Project, to include the installation of a MOD-2 SVU at Medicine Bow, will provide valuable additional information that will benefit the Water and Power Resources Service and the entire Federal Wind Energy Program. If I can be of additional help, please feel free to contact me.

Sincerely,

Donald A. Beattie
Director
Energy Systems Division

LETTER FROM R. KEITH HIGGINSON, COMMISSIONER, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

27 JUN 1980

Mr. Donald Beattie
Director
Energy Systems Division
National Aeronautics and Space
Administration
400 Maryland Avenue, S.W.
Washington, DC 20546

Dear Mr. Beattie:

In response to your letter of May 9, 1980, concerning installation of a MOD-2 wind turbine-generator unit at Medicine Bow, Wyoming, we wish to confirm the Water and Power Resources Service's desire to participate in the installation of this unit and are proceeding with the necessary funding arrangements. We expect partial funding to be available for initial activities in fiscal year 1980.

We are willing to share our wind data, engineering services, and test data of comparable value with the Department of Energy in exchange for the MOD-2 spare parts.

The Water and Power Resources Service representatives who will assist Lewis Research Center (LeRC) with development of details for the schedule and plan in the letter of understanding will be Mr. Abner Watts, Regional Supervisor of Power, Lower Missouri Region; Mr. Charles Maytum, SVU Design Coordinator, Engineering and Research Center; and Mr. Larry Harrell, Head, Procurement and Contracts Section, Engineering and Research Center. The above personnel are actively involved in the ongoing System Verification Installation and their participation will insure a smooth coordination of activities between the two units. I will be the Water and Power Resources Service official to approve the letter of understanding.

We agree that installation of a MOD-2 unit at Medicine Bow will provide valuable information and are looking forward to working with you and the people at LeRC on this project.

Sincerely yours,

(Sgd) R. Keith Higginson
R. Keith Higginson
Commissioner

Interagency Agreement No. 9-07-70-X0123 Between Bureau of Reclamation, Department of the Interior, and National Aeronautics and Space Administration for Management of a Wind/Hydroelectric Integration Study System Verification unit

Date 4/26/79
Donald A. Beattie, Director
Energy Systems Division
National Aeronautics and
Space Administration

Date 5/4/79
R. Keith Higginson, Commissioner
Bureau of Reclamation
Department of the Interior

WIND/HYDROELECTRIC INTEGRATION STUDY SYSTEM VERIFICATION UNIT PROJECT

I. Background

The Bureau of Reclamation has been directed by Congress to accomplish a special study on the feasibility of a wind project near Medicine Bow, Wyoming, which could produce electrical energy and be integrated into the existing Federal hydroelectric facilities. In order to verify the design of wind machines and the system integration concept, the Reclamation's study plan includes procurement of a large wind turbine generator (megawatt size), hereinafter called "wind turbine." Fiscal year 1979 funding has been approved to initiate the construction of this first unit. Reclamation also needs to obtain information about wind energy technology and train personnel for possible future installation and operation of many such units. NASA/Lewis Research Center (LeRC) has developed expertise in managing the procurement, installation, testing, and operation of all the Department of Energy financed large wind turbine machines to date, which include the MOD-0, MOD-0A, MOD-1, and MOD-2. Reclamation wants to utilize this expertise fully for the installation of this large wind turbine while maintaining overall programmatic management responsibility for the system verification unit (SVU).

II. Authority

This Interagency Agreement is pursuant to the Interdepartmental work provision of 47 Stat. 417 (31 U.S.C. Section 686) and Section 203 (C)(5) and (C) (6) of the Space Act of 1958, as amended to date (42 U.S.C. paragraph 2473), and NASA Management Issuances NMI 1050.1B and NMD/A 1050.2A.

III. Purpose

This Interagency Agreement provides for participation of NASA/Lewis Research Center (LeRC) in the following activities:

A. Project management for the design, fabrication, installation, testing, and initial operation of one (1) wind turbine (megawatt size) for Reclamation.

B. Transfer of wind turbine technology by training Reclamation personnel in the design, construction, testing, and operation of large wind turbines.

IV. Objectives

The objectives of the SVU project are to verify the wind hydroelectric integration concept and to develop the expertise within Reclamation to manage the possible future installation and operation of many such units. Reclamation's primary role is the expeditious implementation of possible wind/hydroelectric integration projects and not the research and development of hardware technology for the first unit. Therefore, the SVU shall not involve major new developments in technology, but shall be limited to the existing state of the art.

V. Scope

This agreement shall be subject to the following conditions:

A. This agreement shall become effective for a period of 5 years upon execution and may be extended by mutual agreement.

B. The effort contemplated hereunder includes but is not necessarily limited to the following:

1. LeRC will provide project management for the design, fabrication, installation, checkout, and initial operation of one (1) large wind turbine (megawatt size) designated as a system verification unit (SVU), including the operational and engineering data systems. This unit shall be technically acceptable and will provide electricity at the lowest practical cost per kilowatthour (kWh). The cost per kWh is defined as the average generation cost for a multiple unit installation of machines, located near Medicine Bow, Wyoming, generating about 400 million kWh per year. Calculation of the cost per kWh shall include costs of the wind turbine hardware, site facilities, installation, operations, maintenance, utility system interconnection and switching equipment. The projected cost per kWh of the multiunit installation will be an evaluation criteria in the procurement.

2. The procurement will be competitive with an award by Reclamation of a fixed price contract, if possible. LeRC will make the source selection. Reclamation retains the right to reject the final offer of the selected contractor. The goal for installation of the wind turbine will be fiscal year 1981 at a site near Medicine Bow, Wyoming.

3. Reclamation will provide the site, right-of-way, access roads, connecting transmission line, communication circuits for remote operation and monitoring capability, environmental compliance, and housing for data system equipment.

4. Reclamation will provide operation and maintenance, and LeRC will provide technical assistance, as required, for 2 years after the wind turbine is accepted from the contractor.

5. LeRC will train Reclamation design and operating personnel in the design, construction, testing, and operation of large wind turbines.

6. LeRC will provide monthly technical and financial reports to Reclamation by means of the NASA Management Information Control System (MICS).

C. Reclamation will reimburse LeRC* for expenses incurred in the technical management of the project and all support contract costs related to the operational and engineering data systems. Based on current LeRC estimates, the total costs to be reimbursed by Reclamation should not exceed $1,065,000 and are scheduled by fiscal year as follows:

FY 79	$150,000
FY 80	$235,000
FY 81	$440,000
FY 82	$155,000
FY 83	$ 85,000

LeRC shall not proceed with work which will involve incurrence of costs beyond the fiscal year 1979 funding limitation until and unless Reclamation provides supplemental increments in amendments to this agreement.

D. The provisions of Appendix "A" attached are a part of this agreement.

E. To expedite attainment of the mutual objectives, all activities will be conducted in a spirit of cooperation and with extensive coordination among the Reclamation Contracting Officer, the Reclamation Program Manager (herein designated SVU Design Coordinator), and the LeRC Project Manager. A brief summary of specific responsibilities is as follows:

1. Reclamation shall retain programmatic responsibility.

2. LeRC shall be responsible for project management.

3. LeRC will provide a detailed Project Plan incorporating a technical plan, a training plan, a procurement plan, cost and schedule estimates for Reclamation approval.

4. LeRC will provide the Statement of Work and the evaluation criteria to be included in the request for proposals (RFP) for the SVU project for Reclamation approval.

5. Reclamation will issue the RFP.

6. LeRC will establish a Proposal Evaluation Committee and will evaluate the proposals. Reclamation will provide one technical member and one procurement member for the committee.

7. Reclamation will conduct the negotiations and award the contract. LeRC will provide technical support during the negotiations.

8. The LeRC Project Manager will be responsible for technical direction of the contractor. LeRC will chair and Reclamation will participate in all major contractor technical status and design reviews.

9. LeRC will provide major milestone and quarterly assessments of project technical status to Reclamation.

10. Monthly contractor technical and financial reports will be reviewed by both Reclamation and LeRC.

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* Contingent upon Congressional Appropriations

VI. Public Information

The Reclamation Office of Public Affairs, Lower Missouri Region, will have primary responsibility for public information activities in connection with this program. To assure technical accuracy and programmatic consistency, all releases by either Reclamation or LeRC will be coordinated in advance with the Design Coordinator and the LeRC Project Manager.

Appendix A

I. Definitions

For purposes of this Agreement, "Reclamation" means the United States Department of the Interior, Bureau of Reclamation, or any duly authorized representative thereof, and "Agency" means the National Aeronautics and Space Administration or any authorized representative thereof.

II. Costs Chargeable to Reclamation Funds

Subject to limitations and conditions specified in this Agreement incorporating this Appendix, the Agency may charge Reclamation, except as otherwise provided in articles entitled "Capital Equipment" and "Real Property and Facilities" hereof, the actually incurred costs necessary or incident to the performance of the work, except that no charge shall be made for general administrative or central agency overhead except to the extent otherwise provided in this Agreement.

III. Financing: Reimbursement Agreement

Upon presentation by the Agency of proper vouchers, Reclamation will reimburse the Agency for costs incurred on Reclamation work subject to any limitations on costs otherwise provided in this Interagency Agreement. Requests for reimbursement should be addressed to:

Department of the Interior
Bureau of Reclamation
Regional Office, Lower Missouri Region
P. O. Box 25247
Denver, CO 80225

Requests should be made on Standard Form 1081 citing the Agreement number and Appropriation Symbol.

IV. Notice of Costs Approaching Total Estimated Costs

Whenever the Agency has reason to believe that the total cost of the work under this Agreement will be substantially greater or less than the presently estimated costs of the work, the Agency shall promptly notify Reclamation in writing. The Agency shall also notify Reclamation each fiscal year, in writing, when the obligations incurred under the Agreement are equal to ninety percent (90%) of the presently estimated authority provided by the Agreement. When the costs incurred and outstanding commitments equal one hundred percent (100%) of such estimated total costs, the Agency shall make no further commitments or expenditures (except to meet existing commitments) and shall be excused from further performance of the work unless and until Reclamation shall increase the total estimated costs to be incurred with respect to this Agreement.

V. Financial Reports

The Agency shall furnish Reclamation such costs or financial reports in such form and detail as are available from the Agency accounting system. Such reports shall be furnished in conjunction with the request for reimbursement under Paragraph III not later than 20 working days after the close of each accounting period. Any costs incurred for capital equipment or other assets shall be supported by a list showing the description, make, any serial number, and the cost of each item acquired.

VI. Accounting Records

The Agency shall accumulate the account for obligations and costs incurred in connection with the work being performed under this Agreement in accordance with the Agency's prescribed accounting system.

VII. Termination

Reclamation or the Agency may terminate this Agreement upon 120 days written notice of such termination. In the event of such termination, the Agency shall be reimbursed for obligations actually incurred to the effective date of termination and for commitments extending beyond the effective date of termination to a date not later than the date upon which the Agreement would have expired if not terminated under this paragraph, which the Agency, in the exercise of due diligence, is unable to cancel. Payments under this Agreement, including payments under this article, shall not exceed the ceiling amount elsewhere specified in this Agreement.

VIII. Capital Equipment

(1) "Capital Equipment" means each item of equipment which is expected to have an extended period of service, generally three years or more, and has sufficient monetary value, generally of $1000 or more, to justify continuing accounting records for the items.

(2) Unless expressly authorized in writing by an authorized Reclamation official in advance, the Agency shall not be reimbursed or use funds made available under this Agreement for the procurement or fabrication of capital equipment.

(3) If capital equipment is purchased or otherwise acquired (pursuant to an authorization under subparagraph (2) above), except as may be otherwise agreed by Reclamation and the Agency,

- (i) the property accountability and control shall become the responsibility of the Agency; however, at completion of the project, accountability and control of items with a unit value of $ 1000 or more will be transferred to Reclamation, if so requested by Reclamation.
- (ii) the Agency shall be responsible for the maintenance and safeguarding, control, and accounting of this equipment according to the provisions of NASA Equipment Manual NHB 4200.1, Change 6.

IX. Real Property and Facilities

(1) Unless expressly authorized in writing by an authorized Reclamation official in advance, the Agency shall not be reimbursed or use funds made available under this Agreement for the acquisition or condemnation of any real property or for facility acquisition, construction or expansion.

(2) If the Agency acquires or condemns any real property or any facility or acquires, constructs, or expands any plant or facility pursuant to an authorization under (1) above, except as may be otherwise agreed by Reclamation and the Agency,

(i) The title thereto shall vest in Reclamation;

(ii) The Agency shall be responsible for the maintenance and safeguarding thereof, and

(iii) The Agency shall maintain a record thereof in such a manner as to insure adequate control and accounting satisfactory to Reclamation.

X. Technical Progress Reports - Publication

The Agency will make such reports to Reclamation on the progress of the work under this Agreement as may be mutually agreed upon. Reclamation and the Agency shall both be free to publish and disseminate any reports, data, or other information developed in connection with the Interagency Agreement. To assure technical accuracy and consistency, all technical information dissemination will be coordinated in advance with the Design Coordinator and the LeRC Project Manager.

SUPPLEMENT NO. 1 TO INTERAGENCY AGREEMENT NO. 9-07-70-X0123 BETWEEN WATER AND POWER RESOURCES SERVICE (FORMERLY BUREAU OF RECLAMATION), DEPARTMENT OF THE INTERIOR, AND NATIONAL AERONAUTICS AND SPACE ADMINISTRATION TO PROVIDE FOR MANAGEMENT OF A SECOND SYSTEM VERIFICATION UNIT

Date: 10-27-80
Donald A. Beattie, Director
Energy Systems Division
National Aeronautics and Space
Administration

Date: 1/13/81
R. Keith Higginson, Commissioner
Water and Power Resources Service
Department of the Interior

WIND/HYDROELECTRIC INTEGRATION STUDY

SYSTEM VERIFICATION UNIT PROJECT

Purpose

Interagency Agreement 9-07-70-X0123 is hereby modified to reflect:

1. The Bureau of Reclamation of the Department of Interior has been renamed the Water and Power Resources Service, and is hereinafter referred to as Water and Power.

2. The original project has been expanded to include a second System Verification Unit (SVU) wind turbine.

Background

Under terms of the original agreement, a firm fixed price contract was awarded to the Hamilton Standard Company on February 1, 1980, for the design, fabrication, installation and checkout of a 4-megawatt wind turbine designated as the WTS-4 SVU. On April 23, 1980, NASA received a letter from the Department of Energy (DOE) agreeing to provide approximately $1.5M worth of spare parts from the DOE/NASA MOD-2 program for use by Water and Power for expansion of the SVU project to include a MOD-2 SVU in addition to the WTS-4 SVU at Medicine Bow, Wyoming. In return for the spare parts, Water and Power will provide data and engineering services of comparable value to the DOE wind energy program. Lewis Research Center (LeRC) will modify the existing MOD-2 contract to utilize the spare parts provided by DOE in the fabrication of the MOD-2 SVU. A Memorandum of Understanding (MOU) signed by NASA, DOE, and Water and Power outlines the general terms and conditions of the project. A detailed plan will be developed jointly by NASA/LeRC and Water and Power.

Expanded Scope

1. LeRC will modify the existing MOD-2 contract with the Boeing Engineering and Construction Company to provide a MOD-2 SVU installed and checked out at Medicine Bow, Wyoming. Water and Power will participate in the technical negotiation of the contract modification. The target date for first rotation of the MOD-2 SVU will be September 1981.

2. Water and Power will provide the site, right-of-way, access roads, connecting transmission line, communication circuits for remote operation and monitoring capability, environmental compliance, and housing for data system equipment.

3. Water and Power will provide operation and maintenance of the MOD-2 SVU after acceptance from the contractor. LeRC will provide technical assistance, as required for 2 years after acceptance.

4. LeRC will manage the MOD-2 contract and, through the contractor, will provide operations and maintenance training to Water and Power personnel.

5. LeRC will provide monthly technical and financial reports to Water and Power by means of the NASA Management Information Control System (MICS).

6. NASA and Water and Power will prepare and approve an amendment to the SVU Project Plan to include technical, management, schedule, and cost information for the MOD-2 SVU.

7. Water and Power will reimburse NASA (contingent upon Congressional appropriations) for expenses incurred in: project management and contracting for the design, fabrication, assembly, installation, checkout, and initial operation of the MOD-2 SVU wind turbine for Water and Power. Based on current LeRC estimates, the total cost incurred by NASA/LeRC for the two machine project should not exceed $4,640,000, scheduled by machine and fiscal year as follows:

	WTS-4	MOD-2	Total
FY 80	$235,000	0	235,000
FY 81	440,000	2,800,000[1]	3,240,000
FY 82	155,000	885,000	1,040,000
FY 83	85,000	40,000	125,000

LeRC shall not proceed with work which will involve incurrence of costs beyond the fiscal year 1981 funding limitation unless and until the outyear funds become available through receipt of Congressional appropriations.

8. Except as herein modified, provisions and conditions of the existing Interagency Agreement extend to this Supplement.

Duration

This Supplement shall become effective on the date of the last signature thereto. It shall remain in effect until objectives herein have been accomplished or until terminated by mutual written agreement of the signatories or their successors, not withstanding the terms of Article VII of Appendix A of the Interagency Agreement.

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[1] Includes $1,300,000 being requested in a FY 1981 Budget Supplemental.

Memorandum of Understanding Among the Department of Energy, Water and Power Resources Service, and National Aeronautics and Space Administration for Joint Participation in Installing a MOD-2 Wind Turbine as a Second System Verification Unit at the Medicine Bow, Wyo., Site—September 1980

Date 5/30/80
Donald A. Beattie, Director
Energy Systems Division
National Aeronautics and Space Administration

Date 10-9-80
Dr. Maurice Katz, Director
Office of Solar Power Applications
Department of Energy

Date 1/13/81
R. Keith Higginson, Commissioner
Water and Power Resources Service
Department of the Interior

I. AUTHORITY

THIS MEMORANDUM OF UNDERSTANDING, is made among the Department of Energy, hereinafter referred to as DOE, pursuant to the authority contained in the Energy Reorganization Act of 1974 and the Department of Energy Organization Act of 1977 (P.L. 95-91), the Water and Power Resources Service of the Department of the Interior, hereinafter referred to as Water and Power, pursuant to the interdepartmental work provision of 47 Stat. 417 (31 U.S.C. sec. 686), and the National Aeronautics and Space Administration, hereinafter referred to as NASA, pursuant to sec. 203(c)(5) and (c)(6) of the Space Act of 1958, as amended to date (42 U.S.C. par. 2473), and NASA Management Issuances NMI 1050.1B and NMD/A 1050.2A.

II. BACKGROUND

The DOE Federal Wind Energy Program has as its prime objectives acceleration of the development of reliable and economically viable wind energy systems and the earliest possible commercialization of wind power. A key part of this program is the current development of the MOD-2 wind turbine system. The MOD-2 project includes the installation and testing of three machines at Goodnoe Hills, Washington. A number of critical long lead spare parts were purchased to reduce the risk in meeting the installation and operation schedules of the three machines. The DOE is willing to make some of these parts available to Water and Power after they are no longer needed to support the Goodnoe Hills machines.

Water and Power is in the process of procuring, erecting, and testing, (with the assistance of NASA), one System Verification Unit (SVU) wind turbine at its Medicine Bow, Wyoming, site and is interested in expanding this program to include a second SVU representing a different machine design such as a MOD-2. Water and Power is willing to provide the DOE wind program with technical data and engineering services of comparable value in exchange for the MOD-2 wind turbine spare parts.

NASA, through its Lewis Research Center (LeRC), has developed expertise in managing all of the DOE financed large wind turbine machines to date (which include the MOD-0, MOD-0A, MOD-1, MOD-2, MOD-5, and MOD-6) and the first Water and Power financed SVU (under Interagency Agreement 9-07-70-X0123). NASA/LeRC is further willing to manage the procurement, erection and testing of a second SVU, persuant to the terms and conditions of the foregoing Interagency Agreement as supplemented by mutual agreement by NASA and Water and Power.

III. OBJECTIVES

The objective of the MOD-2 SVU project is to provide a direct comparison of performance and operational characteristics of two different and potentially economical large wind turbine designs through the actual operation of both machines at the same site. The information obtained as a result of this project will be of value to DOE, Water and Power, and NASA in support of their separate and complementary roles in the development and utilization of wind energy as an alternative energy source.

IV. RESPONSIBILITIES

A. DOE will be responsible for:

1. Overall programmatic management of the MOD-2 project.

2. Approving the release of the spare MOD-2 parts listed in item I of Exhibit A following completion of the acceptance tests of the three MOD-2 machines at Goodnoe Hills and/or a determination by NASA that these parts should not be required during the two year operational test of the three MOD-2 machines. The approximate market value, the expected hardware

delivery (on-dock) dates, and the expected final release dates are also shown in Exhibit A. Assembly of the parts into a MOD-2 SVU may be initiated as the hardware is delivered, but shipment of the assembled machine to Medicine Bow cannot occur before the final release date.

B. Water and Power will be responsible for:

1. Providing the site, right-of-way, access roads, connecting transmission line, communication circuits for remote operation and monitoring capability, environmental compliance, and housing for data system equipment.

2. Providing operations and maintenance for the machine after acceptance by the government.

3. Providing funds (contingent upon Congressional Appropriations) for NASA expenses incurred in: project management and contracting for the design, fabrication, assembly, installation, checkout, and initial operation of the MOD-2 SVU wind turbine for Water and Power. Based on current LeRC estimates, the total Water and Power costs should not exceed $3,725,000, scheduled by fiscal year as follows:

Fiscal Year 1981	2,800,000
Fiscal Year 1982	885,000
Fiscal Year 1983	40,000

The approximate value of the parts to be funded by Water and Power is shown in item II of Exhibit A.

4. Furnishing to DOE in a mutually agreeable format, wind data from the Medicine Bow site and other candidate wind turbine sites. DOE will also have access to Water and Power's Operation and Maintenance records on the SVU wind turbines and their actual performance records. In addition, for a period of two years from the date of acceptance of the MOD-2 SVU, Water and Power will furnish to DOE copies of its usual and normal engineering reports on field tests of SVU wind turbines, performed internally or on a contract basis. Such studies and test may include: machine performance comparison, the interactions of the machines with each other and the grid, studies and measurements of noise and other possible environmental assessments,

theoretical wake effects analyses and any actual measured wake effects.

5. Providing programmatic management of the MOD-2 SVU installation and operation in coordination with the Hamilton Standard WTS-4 SVU at Water and Power's Medicine Bow, Wyoming site.

C. NASA through its Lewis Research Center, will be responsible for:

1. Modifying the existing LeRC MOD-2 contract and providing project management for the design, fabrication, assembly, installation, checkout, and initial operation of a MOD-2 SVU wind turbine at the Water and Power site near Medicine Bow, Wyoming.

2. Providing to DOE a determination that the spare parts listed in Exhibit A should not be required during the two year operational test of the three machine cluster at Goodnoe Hills. (This determination will be based on the results of acceptance tests and any other required technical analyses.)

3. Providing technical assistance, as required, for 2 years after acceptance of the MOD-2 SVU from the contractor.

4. Providing MOD-2 SVU operations and maintenance training to Water and Power personnel.

5. Providing monthly technical and financial reports to Water and Power by means of the NASA Management Information Control System (MICS).

D. Water and Power and NASA will be mutually responsible for executing a supplement to the existing Interagency Agreement (9-07-70-X0123) and an amendment to the SVU Project Plan to include the MOD-2 SVU.

V. MODIFICATIONS

This Memorandum of Understanding may be modified by mutual written agreement of the signatories or their successors.

VI. DURATION

This Memorandum of Understanding shall become effective on the date of the last signature thereto. It shall remain in effect until the objectives herein have been accomplished or until terminated by mutual written agreement of the signatories or their successors.

EXHIBIT A

Responsibilities for Providing MOD-2 Parts for Water and Power's MOD-2 SVU at Medicine Bow, Wyoming.

I. The Department of Energy will provide spare MOD-2 parts as follows:

	Approximate Value	Expected Delivery (on-dock) Date	Expected Final Release Date
Rotor	$665K	Jan 1981	May 1981
Tower	232	Aug 1980	May 1981
Gear Box (Stal-Laval)	349	Oct 1980	May 1981
Low Speed Shaft, Quill-Shaft, Couplings	100	Sept 1980	May 1981
Generator	64	Apr 1980	May 1981
Generator Accessory Unit	26	July 1980	May 1981
Low Speed & Yaw Slip Rings	37	July 1980	May 1981
Yaw Bearing, Motors, Gear Boxes, and Brakes	44	Sept 1980	May 1981
Low Speed Shaft Bearings	21	Sept 1980	May 1981
Teeter Bearing	32	Sept 1980	May 1981
Approximate Total Value	$1,570K		

II. Water and Power Resources Services will provide funding to cover the cost of additional required MOD-2 parts estimated to include the following:

Description of Estimated Additional Parts	Approximate Value
Rotor Accessories	$ 85K
Tower Accessories	23
Nacelle	136
Yaw Drive Hydraulics	13
Low Speed Shaft Hydraulics	12
Instrumentation and Other Long-Leads	12
Remote Multiplixing Units	99
Bus Tie Contactor	39
Teeter Brake Stops	13
Power Cables	11
Ice Detection System	6
High Speed Shaft Brake	4
Miscellaneous Hardware	50
Approximate Total Value	$503K

STANDARD FORM 30, JULY 1966
GENERAL SERVICES ADMINISTRATION
FED. PROC. REG. (41 CFR) 1-16.101

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

PAGE 1 OF 5

1. AMENDMENT/MODIFICATION NO. 25
2. EFFECTIVE DATE APR 23 1981
3. REQUISITION/PURCHASE REQUEST NO. 161610(c) & Chg. A(c)
4. PROJECT NO. (If applicable)

5. ISSUED BY CODE
NASA-Lewis Research Center
Energy Sec/Energy & Aero Br/MS 500-305
21000 Brookpark Road
Cleveland, OH 44135

6. ADMINISTERED BY (If other than block 5) CODE

7. CONTRACTOR NAME AND ADDRESS CODE FACILITY CODE
(Street, city, county, state, and ZIP Code)
The Boeing Company
Boeing Engineering & Construction
P. O. Box 3707
Seattle, WA 98124

8.
☐ AMENDMENT OF SOLICITATION NO. ____
DATED ____ (See block 9)
☒ MODIFICATION OF CONTRACT/ORDER NO. DEN3-2
DATED 8/1/77 (See block 11)

9. THIS BLOCK APPLIES ONLY TO AMENDMENTS OF SOLICITATIONS
☐ The above numbered solicitation is amended as set forth in block 12. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation, or as amended, by one of the following methods:
*(a) By signing and returning ____ copies of this amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKOWLEDGMENT TO BE RECEIVED AT THE ISSUING OFFICE PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If, by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

10. ACCOUNTING AND APPROPRIATION DATA (If required)
776-31-4Q-00-000-1-B-4-2511-2-YOR0349-45
Obligated $1,593,037.00
(See Block 12, Item No. 1)

11. THIS BLOCK APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS
(a) ☐ This Change Order is issued pursuant to ____
The Changes set forth in block 12 are made to the above numbered contract/order.
(b) ☐ The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in block 12.
(c) ☒ This Supplemental Agreement is entered into pursuant to authority of 10 U.S.C. 2304(a)(10)
It modifies the above numbered contract as set forth in block 12.

12. DESCRIPTION OF AMENDMENT/MODIFICATION

WHEREAS, the Government desires to increase the effort under ARTICLE I - STATEMENT OF WORK and extend the PERIOD OF PERFORMANCE of the contract; and

WHEREAS, the Contractor has submitted his Proposal No. CCP-15, dated March 2, 1981, in response to RFP3-161610, dated January 20, 1981; and

WHEREAS, the Government has evaluated the Contractor's Proposal No. CCP-15; and

WHEREAS, the Parties hereto have negotiated and agreed to (i) increase the effort under STATEMENT OF WORK, (ii) extend the PERIOD OF PERFORMANCE, and (iii), increase the CONTRACT PRICE of the contract.

NOW, THEREFORE, in consideration of the premises and of the obligations herein set forth, the Parties hereto do mutually agree as follows:

1. Total contract CPFF and obligated amount is $34,530,427.00.
Total contract Fixed Price and obligated amount is $1,593,037.00.
Total contract obligated amount is $36,123,464.00.

Except as provided herein, all terms and conditions of the document referenced in block 8, as heretofore changed, remain unchanged and in full force and effect.

FOD:fpc

13. ☐ CONTRACTOR/OFFEROR IS NOT REQUIRED TO SIGN THIS DOCUMENT ☒ CONTRACTOR/OFFEROR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 3 COPIES TO ISSUING OFFICE

14. NAME OF CONTRACTOR/OFFEROR
(Signature of person authorized to sign)

17. UNITED STATES OF AMERICA
BY
(Signature of Contracting Officer)

ORIGINAL SIGNED BY BOTH PARTIES

15. NAME AND TITLE OF SIGNER (Type or print)
16. DATE SIGNED
18. NAME OF CONTRACTING OFFICER (Type or print)
19. DATE SIGNED

2. Under ARTICLE I - STATEMENT OF WORK of the contract SCHEDULE, as amended through Modification No. 24, add "EXHIBIT D" attached hereto and made a part of this contract.

3. Under ARTICLE II - PERIOD OF PERFORMANCE of the contract SCHEDULE, as amended through Modification No. 24, delete "July 31, 1981" and in lieu thereof insert "March 31, 1982."

4. Under ARTICLE IV - F.O.B. POINT of the contract SCHEDULE, as amended through Modification No. 24, designate the first paragraph as "A." and add the following new paragraph:

"B. The F.O.B. Point for all items under Exhibit D, except reports, shall be Medicine Bow, WY. The F.O.B. Point for reports under Exhibit D shall be destination."

5. Delete ARTICLE VI - ESTIMATED COST AND FIXED FEE of the contract SCHEDULE, as amended through Modification No. 24, in its entirety and in lieu thereof insert the following:

"ARTICLE VI - CONTRACT PRICE

A. Cost-Plus-Fixed-Fee

1. The estimated cost of the performance of the work under Exhibits A, B and C of this contract, the fixed fee, and the total of the estimated cost and fixed fee are set forth below:

Estimated Cost	$32,740,621.00
Fixed Fee	1,789,806.00
Total of the Estimated Cost and Fixed Fee	$34,530,427.00

2. The fixed fee claimed for the accomplishment of the work under Exhibits A, B and C shall be paid in monthly installments based upon a percentage of completion of work as determined by the NASA Contracting Officer.

B. Fixed Price

The Contractor shall furnish and deliver to the Government the following specific Items, in accordance with the details defined under EXHIBIT D, SPECIFICATION FOR MOD-2SVU (Revised March 25, 1981), at the prices and conditions set forth below:

Item 1--

The Contractor shall procure all of the mechanical and electrical (M&E) parts, site unique parts and long lead parts, except those parts provided by the Government and listed on ATTACHMENT I, for one (1) MOD-2SVU, including nacelle and rotor parts:

a. Fixed Price: $366,399.00 ✓
b. Billing date: May 1, 1981
c. Evidence of completion: Copies of accepted purchase orders.

Item 2--

The Contractor shall install an access road and shall provide the required grading at the selected Medicine Bow, WY site.

a. Fixed Price: $125,000.00
b. Billing date: May 15, 1981
c. Evidence of completion: Road completed and in use.

Item 3--

The Contractor shall provide the unique engineering necessary to complete the Medicine Bow MOD-2SVU site foundation design and shall furnish the complete foundation, tower and site drawings to the Government, and shall order remaining site unique parts.

a. Fixed Price: $446,050.00 ✓
b. Billing date: May 15, 1981
c. Evidence of completion: Released drawings and copies of accepted purchase orders.

Item 4--

The Contractor shall provide nacelle and rotor hardware.

a. Fixed Price: $223,025.00 ✓
b. Billing date: June 15, 1981
c. Evidence of completion: Delivery of the hardware to the BEC assembly facility in Seattle, WA.

Item 5--

The Contractor shall complete the foundation construction for the MOD-2SVU the medicine Bow site.

a. Fixed Price: $334,538.00 ✓
b. Billing date: June 15, 1981
c. Evidence of completion: Foundation installed and ready for use.

Item 6--

The Contractor shall deliver to the Medicine Bow site, all of the M&E parts (excluding nacelle and rotor parts), site unique parts and long lead parts for one (1) MOD-2SVU, and shall erect the tower.

a. Fixed Price: $98,025.00
b. Billing date: June 15, 1981
c. Evidence of completion: Parts delivered to site and tower erected thereon.

Vouchers or invoices covering claims under this fixed price provision shall be submitted in quintuplicate to:

Commercial Accounts Section, Mail Stop 500-303
NASA-Lewis Research Center
21000 Brookpark Road
Cleveland, OH 44135

At the time of each billing under this contract provision, the Contractor shall pre-are and furnish to the NASA Contracting Officer, a Material Inspection and Receiving ..eport (DD Form 250 or DD Form 250 (Modified)) for the Element being billed."

. Under ARTICLE IX - OPTIONS of the contract SCHEDULE, as amended through Modification No. 24, add the following Item No. 5:

" Option	Description	Fixed Price (*)	Exercise Date On/or Before
5. OPTION MOD-2SVU	Utilizing the accomplishments under Item 1 through Item 6 in ARTICLE VI, paragraph B, the Contractor shall complete the delivery of all MOD-2SVU parts, components and assemblies to the Medicine Bow site. The Contractor shall complete erection, installation, check-out and personnel training, and acceptance test of the MOD-2SVU in accordance with the details defined under EXHIBIT D, SPECIFICATION FOR MOD-2SVU (Revised March 25, 1981).	$2,137,729.00	July 1, 1981

(*) The Contractor may submit invoices/vouchers in accordance with the following schedule:

	Event	Date	Evidence of Completion	Amount
a.	Spares per ATTACHMENT II ordered	8/ 1/81	Copies of Purchase Orders/ Contracts	$375,040.00
b.	Nacelle components completed	9/15/81	All nacelle components are at the site	262,528.0
c.	Rotor components completed	10/15/81	All rotor components are at the site	187,520.00
d.	Nacelle installed	10/15/81	Complete nacelle assembly erected on tower	375,040.00
e.	Rotor installed	11/15/81	Complete rotor assembly erected on tower	187,520.00
f.	MOD-2SVU completely installed	12/15/81	Initial controlled rotation	375,040.00
g.	Checkout, training and acceptance test	1/15/82	Complete checkout, personnel training and acceptance test	187,520.00
h.	Government acceptance of the MOD-2SVU	3/31/82	Signed DD-250 by the Government	187,521.00

7. Under ARTICLE XXXI - GOVERNMENT-FURNISHED PROPERTY of the contract SCHEDULE, as amended through Modification No. 24, designate the first paragraph as "A." and add the following new paragraph:

"B. The Contractor is authorized to use, in the performance of Exhibit D, the Government-Owned Property in his possession and listed on Attachment I, attached hereto and made a part of this contract."

8. The following new Articles applicable to this Modification No. 25 are added to this contract SCHEDULE:

"ARTICLE XXXII - SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN

A. The Contractor shall comply with the provisions of the following identified Small Business and Small Disadvantaged Business Subcontracting Plan and approved by the Government and is attached hereto and made a part hereof:

SMALL BUSINESS CONTRACTING PLAN - SYSTEM VERIFICATION UNIT (SVU) - REV. 3/27/81.

B. The failure of the Contractor or any subcontractor to comply with (i) the clause entitled 'Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals,' or (ii) the above referenced plan shall be deemed a material breach of the contract or subcontract, as applicable.

ARTICLE XXXIII - WYOMING SALES AND USE TAX

The Contractor warrants that the fixed price of this Modification No. 25 does not include provision for the payment of the Wyoming sales or use tax levied on the purchase of all equipment, material and supplies used and consumed in performance of this Modification No. 25 by the Contractor. The Contractor further warrants that the fixed price does not include provision for payment of the premium on the surety bond required by the state of Wyoming. This bond is for 3% of the total Modification No. 25 fixed price and must cover the entire Modification No. 25 period of performance. If the Contractor is required to pay the above cited Wyoming sales or use tax and/or post the above cited surety bond, the fixed price of this Modification No. 25 will be increased by the amount of such tax payments and/or the premium paid for the surety bond.

ARTICLE XXXIV - GENERAL PROVISIONS FOR FIXED-PRICE-SUPPLY CONTRACT

Incorporation of Contract Clauses By Reference, General Provisions For Fixed-Price-Supply or Fixed-Price-Services Contract, pages 1 and 2, dated September, 1980, are hereby attached to and made a part of this contract with this Modification No. 25 and without retroactive applicability."

ARTICLE XXXV - G&A EXPENSE RATE UNDER MODIFICATION NO. 25

As the basis for Modification No. 25 to this contract, the Contractor proposed and the Government has accepted a ceiling G&A Expense rate of 30%. In the performance of Exhibit under Modification No. 25 and/or in the event of any changes thereto, the Contractor agrees to apply the ceiling G&A Expense rate of 30%, and the Government is not obligated to pay costs hereunder that are based on any other G&A Expense rate.

National Aeronautics and
Space Administration

Lewis Research Center
Cleveland, Ohio
44135

4511 June 24, 1981

TO: 1412/Contract Specialist, Energy Section
Attn: F. O. Driscoll

FROM: 4511/Mod-2 SVU Project Manager

SUBJECT: Change to Contract DEN 3-2, Modification 25

This memo is to request a change to the subject contract under Article IX - Options. The option, Item 5, shall be changed into three parts, as follows:

Option	Description
1. Item 5A	Complete erection, installation, and first rotation of the Mod-2 SVU at Medicine Bow, Wyoming. All spare components will be ordered per Attachment II, except the generator and quill shaft.
2. Item 5B	Order a spare generator and quill shaft.
3. Item 5C	Complete checkout, personnel training, and acceptance testing on the Mod-2 SVU. Government acceptance will be completed with a signed DD-250. This item will be exercised on/or before December 1, 1981.

The total option cost of the subject contract will not change. Please exercise option, Item 5B as soon as possible.

Richard A. Edkin

Richard A. Edkin

cc:
4511/R. A. Edkin
1412/T. Long
4510/WEPO Files

INCORPORATION OF CONTRACT CLAUSES BY REFERENCE
GENERAL PROVISIONS
FOR
FIXED-PRICE-SUPPLY OR FIXED-PRICE-SERVICES CONTRACT

A. The following clauses are hereby incorporated in this contract by reference with the same force and effect as if set forth in full. The complete text for all of these clauses is available from the procurement office issuing this contract, and will be furnished upon request. The contractor hereby acknowledges that he has in his possession or is otherwise familiar with all of the clauses incorporated herein by reference, and agrees to perform this contract in accordance with the provisions of such referenced clauses, and the other provisions of this contract.

CONTRACT CLAUSE NO.	NASA PR PARAGRAPH	CLAUSE TITLE	DATE OF CLAUSE	MODIFIED IN SCHEDULE
1.	1.307-2	Priorities, Allocations and Allotments	Sep.76	
2.	1.503	Covenant Against Contingent Fees	Feb.62	
3.		Reserved		
4.	1.805-3(a)	Utilization of Labor Surplus Area Concerns	Sep.70	
5.	1.1208(a)	New Material	Jun.66	
6.	1.1208(d)	Government Surplus	Jun.66	
7.	1.2302-2	Clean Air and Water Clause	Oct.76	
8.	6.104-5	Buy American Act	Sep.61	
9.	7.103-1	Definitions	Sep.62	
10.	7.103-2	Changes	Sep.62	
11.	7.103-3	Extras	Sep.62	
12.	7.103-4	Variation in Quantity	Sep.62	
13.	7.103-5	Inspection	Sep.62	
14.	7.103-6	Responsibility for Supplies	Sep.62	
15.	7.103-7	Payments	Sep.62	
16.	7.103-8	Assignment of Claims	Sep.62	
17.	7.103-9	Additional Bond Security	Sep.62	
18.	7.103-12	Disputes	Jun.80	
19.		Reserved		
20.	7.103-19	Officials Not to Benefit	Sep.62	
21.	7.103-53	Interest	Nov.74	
22.	7.103-54	Pricing of Adjustments	Aug.70	
23.	7.104-4	Notice to the Government of Labor Disputes	Sep.62	
24.	7.104-15	Examination of Records by Comptroller General	Apr.76	
25.	7.104-17	Convict Labor	Oct.74	
26.	7.104-42(a)	Audit by National Aeronautics and Space Administration NOTE: The above clause is not applicable to formally advertised contracts which do not exceed $100,000.	Aug.79	
27.		Reserved		
28.	8.701	Termination for Convenience of the Government	Jun.72	
29.	8.707	Default	Oct.69	
30.	9.102(a)	Authorization and Consent	Jan.64	
31.	9.104	Notice and Assistance Regarding Patent & Copyright Infringement	Nov.64	
32.	9.106	Filing of Patent Applications	Sep.62	
33.	11.401-1(c)	Federal, State, and Local Taxes	Apr.75	
34.	12.303-1	Contract Work Hours Standards Act-Overtime Compensation	Nov.64	
35.	12.605	Walsh-Healey Public Contracts Act	Sep.62	
36.	12.804(a)	Equal Opportunity	Mar.80	
37.	12.1302-1	Affirmative Action for Handicapped Workers	May 76	
38.	PRD 77-4 Item V, Para. 3(b)	Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era	Apr.77	
39.	1.332(a)	Utilization of Women-Owned Business Concerns	May 80	

B. Any of the following clauses when designated by an (x) shall be deemed to be a part of this contract and are hereby incorporated by reference in accordance with Paragraph A above.

( )	1.	1.330(c)(3)	Limitation of Liability-Service Contract	Dec.78
(X)	2.	1.805-3(b)	Labor Surplus Area Subcontracting Program	Sep.70
( )	3.	1.1206-3(b)	Brand Name or Equal	Nov.73
(X)	4.	1.5204(d)	Safety and Health	Jun.72
( )	5.	1.5406	Acquisition of Existing Government Equipment	Mar.80
( )	6.	7.104-12	Security Requirements	Jul.77
(X)	7.	7.104-21(a)	Limitation on Withholding of Payments	Sep.62
(X)	8.	7.104-28(a)	Price Reduction for Defective Cost or Pricing Data-Price Adjustments	Aug.79
(X)	9.	7.104-28(b)	Price Reduction for Defective Cost or Pricing Data	Aug.79
( )	10.	7.104-35(a)	Progress Payments for Other than Small Business Concerns	May 80
( )	11.	7.104-35(b)	Progress Payments for Small Business Concerns	May 80
(X)	12.	7.104-40	Competition in Subcontracting	Sep.62
(X)	13.	7.104-43(a)	Subcontractor Cost or Pricing Data	Aug.79
(X)	14.	7.104-43(b)	Subcontractor Cost or Pricing Data -Price Adjustments	Aug.79
( )	15.	7.104-45(a)	Limitation of Liability	Jun.78
( )	16.	7.104-45(b)	Limitation of Liability-Major Items	Jan.79

t'd - Fixed-Price-Supply or Fixed-Price-Services Contract

TRACT US).	NASA PR PARAGRAPH	CLAUSE TITLE	DATE OF CLAUSE	MODIFIED IN SCHEDULE
) 17.	7.104-53(a)	NASA Financial Management Reporting	Oct.74	
) 18.	7.104-53(b)	NASA Financial Management Reporting (Performance Analysis Report)	Nov.71	
) 19.	7.104-55(a)	Cost Accounting Standards	May 78	
) 20.	7.104-55(a)(2)	Disclosure and Consistency or Cost Accounting Practices	May 78	
) 21.	7.104-55(b)	Administration of Cost Accounting Standards	Apr.79	
) 22.	7.104-56	Order of Precedence	Nov.65	
) 23.		Reserved		
) 24.	7.105-1	Alterations in Contract	Sep.62	
) 25.	7.105-8(c)	Stop Work Order	Jun.72	
) 26.	7.203-30	Notice of Intent to Disallow or not Recognize Costs	Jan.79	
) 27.	9.203-3(a)	Rights in Data-General	Nov.77	
28.	12.804(c)	Equal Opportunity Preaward Clearance of Subcontractors	Jul.75	
) 29.	12.1004(a)	Service Contract Act of 1965, as amended	Mar.73	
) 30.	12.1050-2	Fair Labor Standards Act and Service Contract Act-Price Adjustment	Jul.70	
) 31.	13.311	Installation Provided Government Property	Jun.78	
) 32.	13.702(a)	Government Property-Fixed Price	Sep.79	
) 33.	13.702(a)	Government Property-Fixed Price (As Modified by 13.702(b))	Sep.79	
) 34.	13.702(c)	Liability for Government Property Furnished for Repair or Other Services	May 76	
) 35.	13.709	Government Property Furnished "As Is"	Oct.67	
) 36.	13.710	Government Property (Short Form)	Oct.67	
) 37.	21.500	Report on NASA Subcontracts	Jun.78	
) 38.	23.201-1(a)	Subcontracts	Aug.69	
) 39.	PRD 79-2	Certification-Wage and Price Standards	Feb.79	
) 40.	1.332(b)	Women-Owned Business Concerns Subcontracting Program	Jun.80	

In addition to the above clauses incorporated by reference, the following clauses when designated by an (x) are attached hereto and shall apply in the performance of the contract.

) 1.	7.104-54	Financial Reporting of Government-Owned/Contractor-Held Property	Jun.79
) 2.	7.108-1	Incentive Price Revision (Firm Target)	Aug.79
) 3.	7.108-2	Incentive Price Revision (Successive Targets)	Aug.79
) 4.	9.203-7(a)	Rights to Proposal Data (Technical)	Nov.77
5.		Reports of Work	Jan.75
( )		a. With NASA Form 533P	
( )		b. With NASA Form 533M & Contractor's Schedule Report	
( )		c. With NASA Form 533M and 533P	
( )		d. With NASA Form 533M and 533P - Technical Assessment of Progress excluding columns 7 through 10	
		e. With NASA Forms 533Q and 533P	
( )		f. With NASA Forms 533M, 533Q and 533P	
) 6.	7.104-86	Notification of Changes	Aug.77
) 7.		Utilization of Small Business Concerns and Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals	Jun.80

SMALL BUSINESS CONTRACTING PLAN - SYSTEM VERIFICATION UNIT (SVU)

The policy of The Boeing Company is to purchase a fair proportion of its requirements for supplies and services from small business and businesses controlled by socially and economically disadvantaged individuals. An active program exists at Boeing to identify potential subcontractors in these categories. Goals are established for percent and dollar commitments to be made to them. Progress made in increasing their share of subcontracts is reviewed monthly by management.

Organizational efforts to achieve pre-established goals is included as a specific item in each operating company and division plan. The general manager of the operating company or division is required to commit a specific percentage of procurement dollars will be placed with these firms. The degree to which general managers achieve ratings or exceed these goals is a factor considered in evaluating their personal performance.

A corporate office aggressively seeks potential subcontractors in the small business categories. The corporate office coordinates efforts to assist buyers throughout Boeing in carrying out the program and has a coordinator stationed in the southern California and Chicago areas to counsel with and assist potential subcontractors.

Firms are consciously considered as a part of a formal make/buy process which is followed on each Boeing program. Attempts are made to structure the work in such a way as to enhance the capability of minority enterprises to compete effectively. All Boeing Engineering and Construction Company make/buy plans are reviewed and approved by both the BEC Director of Materiel and the appropriate program manager. These concurrences are a prerequisite to final adoption of a plan.

During 1980 Boeing Engineering and Construction placed 51,221,644 or 47.8% of its subcontracts with small business firms and 4,429,790 or 4.1% with small disadvantaged business firms. During this period of time, seven (7) plans were submitted and where procurement has started, goals are being met or exceeded.

In accordance with the requirements of Public Law 95-507, the subcontracting plan for the SVU program includes the elements described in the paragraphs that follow.

SMALL BUSINESS CONTRACTING PLAN (SVU)

Rev. 3/27/81

Percentage goals (expressed in terms of percentage of total planned subcontracting dollars) for the utilization of subcontractors as small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals:

	Total Estimated Cost of Prime Contract	Total Estimated Cost of Subcontracts
Dollars	$3,560,000	$236,000
Percentage Goals		
Small Business	40%	$ 94,400
Small Disadvantaged Business	2%	$ 4,700

The SVU contracts offer very little opportunity for subcontracting. The contract is labor intensive with only an estimated 6-7% of the total cost being subcontracted. Of this figure, nearly all will be allocated to purchasing supplie and off-the-shelf sophisticated test hardware, such as recorders, x-y plotters, scopes and bolt tensioning devices. There are no known disadvantaged businesses which could provide this equipment. It is anticipated that approximately 20% of the purchased hardware will be brought from small business firms.

In the development of goals to be subcontracted to small and small disadvantaged business firms, BEC identifies potential suppliers by referring to the Small Business Administration's Procurement Automated Source System, the National Minority Purchasing Council Vendor Information Service, the office of Minority Business Data Center in the Department of Commerce and the facilities of local small business and minority associations.

Typical small businesses to be utilized as suppliers on the SVU Program:

ATACS Production Inc.
Van Vetter Inc.
Metrix Mfg. Co.
Protection Controls
Flamand Electric
Wil-Jo
Spider Staging
Sea West
Hamblin Industries
Blue Chip Mfg. Co.
Golden Gate Switchboard

As the estimated cost of all subcontracts will not exceed $500,000, there is no anticipation of requiring a SB contracting plan for lower tier subcontractors.

The individual who will administer the subcontracting program of this contract is:

Name: Donald O. Wingrove
Title: Director of Materiel
Address: P.O. Box 3707, Mail Stop 9A-21
City, State, Zip: Seattle, WA 98124
Telephone Number: (206) 575-5840

Donald O. Wingrove is responsible for, and has final authority over, all procurement for BEC. His duties include responsibility for developing small and small disadvantaged business firms as sources of supply. He plans and supervises the actions in this respect described in the plan. Specifically, his responsibilities encompass the following.

(1) Ensure that "make or buy" decisions include adequate and timely consideration of the potentialities of Small Business and Small Disadvantaged Business concerns.

(2) Ensure that bidders' lists for competitively bid items include Small Business and Small Disadvantaged Businesses when such capability exists.

(3) Assist Small Business and Small Disadvantaged Business concerns by coordinating program requirements to allow maximum response time

on bids, and tailor specifications, delivery quantities and schedules to allow maximum participation without jeopardizing program commitments

(4) Monitor and motivate the performance of the buyers assigned to support this program to meet or exceed the committed goals, including group meetings, training classes and special recognition of performance by individual buyers.

(5) Maintain and facilitate availability to individual buyers, the wealth of data concerning small and small disadvantaged business capabilities.

To assure small business and small disadvantaged businesses have an equitable opportunity to compete for subcontracts, all buyers shall:

a. Analyze program hardware and service requirements to determine areas of potential SB and SDB participation.
b. Coordinate with design engineers to attempt to further isolate areas of involvement and, where applicable, consider "breaking down" larger assemblies into smaller packages for ease of bidding by SB and SDB.
c. Ensure communications are kept open during the formulation of the potential bidder list and bidding process.
d. Maintain information listings of minority business enterprises.
e. Consult with local and regional SBA offices and the resources identified below for assistance in expanding the listing.
f. Adhere to procedures to guide buyers in actively working with small firms.
g. Foster a program to advise small and economically disadvantaged firms in technical or business matters to aid them in competing more effectively.
h. Search for small business and small disadvantaged business concern capabilities to provide goods and services.

In accordance with NASA PN 80-13, small business and small disadvantaged business clauses shall be included in all contracts exceeding $10,000 with exceptions as noted in NASA PN 80-13.

All subcontracts in excess of $500,000 will include the provision entitled "Subcontracti Plan for Small and Small Disadvantaged Business Concerns (negotiated June, 1980). This paragraph also calls for a description of the offeror's procedures for the review, approval and monitoring for compliance with subcontract plans adapted by subcontractors. BEC procedures require the following:

a. Requests for proposals to prospective subcontractors where the subcontract is expected to exceed $500,000 in value will include the statement that the selected bidder will be required to submit to the contractor prior to subcontract award an acceptable subcontract plan.
b. BEC will advise selected subcontractor on development of a plan, if subcontractor is inexperienced in this function.
c. Plan submitted by selected subcontractor will be reviewed for conformance with NPN 80-13, and the selected subcontractor will be given additional guidance, as necessary.
d. Approved plan will be incorporated by reference in the subcontract.
e. BEC will review efforts of subcontractor to determine whether subcontractor has and is making good faith effort to comply with his plan. This periodic review will monitor performance relative

to the subcontractors plan. If necessary, buyer will visit small businesses to offer assistance, clarification of requirements, etc.

f. BEC will require subcontractor to correct deficiencies where found.

g. Subcontractors will be required to conduct training classes where adequate subcontract programs have not been established previously.

h. Subcontractors will be required to report performance against their goals on forms 0348-0020, 0348-0013, and NASA form 524.

In order to demonstrate the procedures adapted to comply with the requirements which have been set forth in this plan, BEC will maintain records both for total company procurement and on a contract by contract basis as follows:

(1) Name and address of each subcontractor.

(2) The number and amount of individual purchases of less than and more than $10,000 awarded to small businesses.

(3) The number and amount of purchases of less than $10,000 awarded to large businesses.

(4) The number and amount of purchases over $10,000 to large businesses on which small business firms were not solicited because the purchases were: large mandatory; no known small business source; small business sources were ruled out for technical, quality, delivery or other justifiable reasons.

(5) The number and dollar amount of purchases over $10,000 from large business where one or two small businesses were solicited, and, where three or more small businesses were solicited. This information will also include the number and dollar amount of purchases where no small business bid was received, or, where the small businesses bid was low, or, where the small business bid was low but disqualified for justifiable reasons.

(6) The number of purchases where one or two minority owned business enterprises were solicited, or, where three or more were solicited. This information shall also include the number of purchases where no minority small business bid was received, or the minority small business bid was low, or, where low was disqualified for justifiable reasons.

(7) The number and dollar amount of all purchases where minority owned business enterprises were awarded the contract.

(8) Source lists of small business and small business concerns owned and controlled by socially and economically disadvantaged businesses and efforts to identify and award subcontracts to such small business concerns.

(9) Company wide small and small disadvantaged source lists, guides and other data identifying small and small disadvantaged businesses.

(10) Organizations contacted for recommendations of small and small disadvantaged sources of supply.

(11) Records on all subcontract solicitations over $100,000, indicating (a) whether small business was solicited, (b) whether small disadvantaged business was solicited, and if not, why not, (c) reasons for the failure of solicited small business or small disadvantaged business to receive the subcontract award.

(12) Contacts with minority and small business trade associations.

(13) Attendance at small and minority business procurement conferences and trade fairs.

(14) Contacts with business development organizations.

(15) Contractor internal activities to guide and encourage buyers such as workshops, seminars, and training programs.

(16) Internal monitoring activities to evaluate compliance.

BEC will submit such periodic reports and cooperate in any studies or surveys as may be required by the National Aeronautics and Space Administration, or Small Business Administration in order to determine the extent of compliance with this subcontracting plan.

To provide visibility to the customer, BEC intends to submit quarterly, and at contract completion, NASA form 524 quarterly.

A review of BEC's Small and Disadvantaged Subonctracting Plan was recently completed by the U.S. Small Business Administration, Region X, resulting in a statement of "interim compliance with contractual requirements."

EXHIBIT D

(Revised March 25, 1981)

Specifications for Mod-2 SVU

I. INTRODUCTION

The Department of Interior, Water and Power Resources Service, hereinafter referred to as Water and Power, is in the process of procuring, erecting, and testing (with the assistance of NASA), one System Verification Unit (SVU) wind turbine and is interested in expanding their program to include a second SVU representing a different machine design. Water and Power is willing to provide the Department of Energy (DOE) Wind Energy Systems Division with technical data and engineering services of comparable value in exchange for Mod-2 wind turbine spare parts. The DOE, being engaged in the research and development of large, megawatt-size wind turbine generators, is willing to provide to Water and Power certain Mod-2 spare parts. This cooperative effort, in support of the National Wind Energy Program, forms the basic objective of this Mod-2 SVU Wind Turbine Task. The design, fabrication, assembly, checkout, and acceptance of a Mod-2 SVU will provide a direct comparison of performance and operational characteristics of two different and potentially economical, large wind turbine designs through the actual operation of both machines by Water and Power in identical environments.

II. SPECIFIC WORK REQUIREMENTS

A. Design

The Mod-2 SVU wind turbine shall be identical in design to the third Mod-2 Wind Turbine System specified in Exhibit A, paragraph 2.8 Task VIII - Third Mod-2 Wind Turbine. Exceptions to the identical design shall be limited to the following:

1. The foundation of the Mod-2 SVU shall be designed based on the actual site to be selected by Water and Power at Medicine Bow, WY and hereafter referred to as the Medicine Bow site No. 2. The SVU foundation must be designed for the same high wind criteria as the Mod-2 (120 mph at 30 feet, with a wind shear exponent of 0.02).
2. The performance data systems shall be designed to provide

continuous recording of selected parameters in the Medicine Bow control building. The Contractor shall recommend for NASA approval these performance parameters, as well as, any Third Mod-2 engineering parameters which may not be applicable to the Mod-2 SVU.

3. The Contractor shall provide all of the components, wiring, and interface circuits for the display and recording equipment in the Medicine Bow control building. The display and recording equipment consists of a patch panel, strip chart recorder, and a digital tape recorder. The Contractor shall furnish and install an 8-channel Brush recorder, Model 2800 with preamps, patch panel, and associated interface equipment in a standard 19-inch wide rack. The control system CRT shall also be installed in the same rack if space is available. A blower shall be installed at the bottom of the rack to provide cooling air for the electronic equipment. The existing Digital Tape Recorder will be utilized by the Contractor. One track shall be used to record the Mod-2 SVU data.

4. The tower access door shall be designed for orientation in the downwind (East by Northeast) direction.

5. Two identical remote control modules shall be designed for installation at the Water and Power Central Control Station, Casper, Wyoming (1 module) and at the Medicine Bow control building (1 module). These remote control modules shall have diagnostic as well as startup/shutdown capabilities. The modules shall have mutual, simultaneous monitoring capability, with single station command capability switchable between the two modules. In addition, the Contractor shall design the necessary interface components to permit a Water and Power supplied radio link between the Medicine Bow and the Casper control stations.

6. The Contractor shall design the necessary electrical installation to transform the Mod-2 SVU specified voltage output of 4.16kV to the WPRS required voltage output of 34.5 kV. This design shall include the transformer, associated switchgear, and the transformer station foundation.

7. The Contractor shall incorporate an upgraded yaw drive system capable of controlling/correcting nacelle yaw postion during operation in wind speeds up to 60 mph. The Contractor shall supply data to NASA to verify proper SVU operation at a wind speed of 60 mph.

B. Fabrication

1. The Contractor shall complete fabrication of hardware for the Mod-2 SVU, designed in accordance with paragraph A, above, utilizing the following resources:

a. Government-owned components listed on Attachment I, attached hereto and made a part hereof, and any residual usable hardware i.e. nuts, bolts, washers, brackets, wire, etc., from the three (3) Mod-2 Wind Turbine Systems erected at Goodnoe Hills, Washington;

b. Remainder of hardware necessary to complete the SVU WTS to be provided by the contractor.

2. The Contractor shall provide Mod-2 major spare components listed in Attachment II, attached hereto and made a part hereof, in addition to the hardware necessary for fabrication of one complete SVU WTS specified in paragraph B.1.a, above.

3. The Contractor shall provide an aircraft warning light for the nacelle to meet FAA requirements (a three lamp, 120 degree arc strobe is required).

C. Assembly

The Contractor shall assemble the Mod-2 SVU from the components and subassemblies listed on Attachment I and/or fabricated under paragraph B., above. Assembly of the Mod-2 SVU shall be initiated as the hardware is available; however, erection of the assembled Mod-2 SVU at the Medicine Bow site shall not occur until paragraph 2.6.3, Acceptance Testing of Exhibit A has been completed or upon approval of the NASA Project Manager.

D. Installation

1. The Contractor shall provide for and/or perform the following:

a. The Contractor shall comply with the site environmental, safety and health, and other special provisions relating to the installation of the SVU as specified in Attachment III, attached hereto and made a part hereof.

b. Preparation of the site to coincide with the completion of the fabrication of the Mod-2 SVU. This shall include the planning, scheduling, and completion of the site access road and all associated site grading necessary for erection; the permanent foundation of the Mod-2 SVU, the fencing (as required) surrounding the wind turbine or ancillary equipment, cranes and other site facilities necessary for Mod-2 SVU erection.

c. Installation of underground, rodent-proof 34.5 KV power cable (per specifications from WPRS) from the Mod-2 SVU to the Water and Power, three-phase disconnect switch at the terminal structure. This power cable must meet the National Electric Code requirements to carry full fault current to ground. The Contractor shall use the specifications provided by WPRS. The Contractor is responsible for digging the cable trench, installing the cable, and backfilling. In addition, the Contractor shall supply the necessary surge protection for the cable as well as the terminal structure potheads. The terminal structure is a single pole, dead-end-type structure with three conductors and an overhead ground wire terminated at the top of the pole approximately 30 feet above ground level.

d. Installation of the following communication lines:

(1) Data lines necessary to complete the interconnect between nacelle, tower base ,and the control building of performance data system elements designed in paragraph A., above.

(2) Interconnecting data lines between the nacelle and the remote control module located in the control building.

(3) Two voice telephone lines between the control building, the tower base, and the nacelle.

e. Installation of identical remote control modules at the Water and Power Central Control Station, Casper, Wyoming, and at the Medicine Bow control building. These remote control modules shall have diagnostic as well as startup/shutdown capabilities. In addition, the Contractor shall provide the necessary interface components to permit a Water and Power supplied radio link between the Medicine Bow and the Casper control stations.

f. Shipment of all components and/or subassemblies to the Medicine Bow site.

g. Assembly and site installation of the complete Mod-2 SVU wind turbine system per the conditions noted in paragraph C, above. In addition, the Contractor shall conduct a review meeting prior to the nacelle lift and rotor lift. Also, a system operation review meeting will be required before the SVU is synchronized with the utility. The Contractor shall notify the NASA Project Manager at least two weeks prior to each review meeting.

h. Training of the Water and Power personnel in the operation and maintenance of the wind turbine system. This session shall be completed prior to the completion of paragraph E and shall not exceed a duration of four work weeks.

i. An analysis and listing of recommended spare parts for SVU operational support.

j. Delivery of three(3) copies of an operation and maintenance instructions manual to Water and Power prior to completion of paragraph E. The material to be contained in the manual shall be of sufficient depth and scope to enable maintenance personnel to perform all work related to the descriptive title of the manual.

2. The Government will be responsible for:

a. Making all arrangements and providing construction power including transformers, interconnect costs, and energy consumption charges.

b. Making all arrangements and providing any necessary requirements for on-site commercial phone service during construction and through turbine acceptance. Monthly service and installation charges shall be the responsibility of the Contractor.

c. Obtaining all necessary leases or easements for private and public lands for the Mod-2 SVU site in the performance of this contract and all required permits from the Federal Aviation Administration.

d. Providing all Federal, state, and local environmental assessments and other approvals as necessary.

e. Providing radio communication circuits from the control building to the Casper Control Center at Casper, Wyoming.

f. Providing maintenance support equipment necessary for SVU maintenance during installation, checkout, acceptance, and post acceptance operations. This maintenance support equipment is currently used for the Mod-2 WTS at Goodnoe Hills. The Goodnoe Hills site will have first priority on the use of this equipment.

E. Checkout/Acceptance

1. For system checkout, the Contractor shall demonstrate that the Mod-2 SVU is completely operational and that all subsystems such as pitch change mechanism, control system, switchgear, etc., are functioning properly. Whenever feasible, the Contractor shall conduct shop testing of component and/or subsystems during fabrication of the Mod-2 SVU to minimize the field checkout required. In particular, spin testing and low speed, full torque testing of the alternate gear box for contingency spare shall be conducted. The gear box testing shall be subject to the following conditions:

a. Any costs associated with the disassembly and inspection of the gearbox upon completion of the test shall not be charged to the Government.

b. Any damaged components resulting from the test shall be replaced by the Contractor and not charged to the Government.

c. Reassembly of the gearbox for the 17.5 rpm spin test shall not be charged to the Government.

d. In consideration for the use of this Government-owned equipment, the Contractor shall provide a copy of the test results.

The Contractor shall furnisn his plan and detailed procedures for system checkout to the NASA Project Manager for approval at least four weeks prior to the start of checkout at Medicine Bow. Targeted date for the first wind powered rotation shall be December 1, 1981.

2. For acceptance, the Contractor shall demonstrate that all components/subsystems are operating within the specified design limits defined for the Third Mod-2 Wind Turbine under 2.6 Task VI - Installation, Checkout, and Acceptance of EXHIBIT A. As a minimum, the Contractor shall perform the following acceptance tests:

a. Startups and shutdowns shall be demonstrated at below rated, rated, and up to approximately 60 mph, in available winds. The yaw system shall be tested at the high wind condition.

b. Operation at rated power (2.5mW) shall be about 28 to 60 mph at hub height and corrected for altitude at Medicine Bow. The operation at a 60 mph wind speed is subject to available winds at the site.

c. Emergency shutdowns shall be performed for simulated loss of utility intertie.

d. It shall be demonstrated that Medicine Bow and Casper control functions operate properly during a 24-hour period.

The Contractor shall furnish his plan and detailed procedures for acceptance testing to the NASA Project Manager for approval at least four weeks prior to the start of the acceptance test. Target date for acceptance of this Mod-2 SVU by the Government is March 1, 1982.

ATTACHMENT I

Government-Owned Components

1. Gearbox
2. Low-Speed Shaft Bearing
3. Yaw Bearing
4. Low-Speed Shaft Hydraulic Valves
5. Yaw Drive Motor & Gearbox
6. Teeter Bearing
7. Yaw Brake
8. Steel Raw Material for Rotor
9. Raw Material for Low-Speed Shaft
10. Low-Speed Shaft Hydraulic Tubing & Fittings
11. Nacelle
12. Tower Slip Ring Assembly
13. Raw Material for Teeter Brake
14. Low-Speed Shaft Slip Ring Assembly
15. Removable Coupling for Quill Shaft
16. Low-Speed Reservoir
17. Generator Accessory Unit
18. Rotor Tip Bearing
19. Raw Material for Yaw Brake
20. Wind Sensors
21. Tachometer
22. Pitch Potentiometer
23. Vibration Sensor
24. Bearing Temperature Sensor
25. Intrusion Alarm
26. J-Box Slip Ring
27. Studs for Yaw Bearing
28. Generator
29. Low-Speed Shaft
30. Yaw Drive Hydraulics
31. Tower
32. Nacelle Control Unit Cabinet Assembly
33. Rotor System

ATTACHMENT II

	Component	Quantity
1.	High-Speed Shaft Couplings	2
2.	Quill Shaft Coupling	1
3.	Teeter Bearing and Housing Set	1
4.	Low-Speed Shaft Bearing (Front)	1
5.	Low-Speed Shaft Bearing (Rear)	1
6.	Rotor Tip Spindle Subassembly	1
7.	Rotor Slip Ring Subassembly	1
8.	Yaw Slip Ring Subassembly	1
9.	Quill Shaft	1
10.	Generator	1

ATTACHMENT III

A. ENVIRONMENTAL CONSTRAINTS FOR THE MEDICINE BOW SITE

The following NEPA compliance stipulations are prescribed for this project to limit adverse environmental effects. To assure compliance with these stipulations, Water and Power personnel or their designated representatives, shall inspect and monitor the Contractor's activities during construction. Water and Power will notify the NASA project manager if the Contractor fails to comply with the following stipulations.

1. Construction activity at the WTG site shall be limited to an area not to exceed 4.5 surface acres.
2. Grading and graveling shall be restricted to those areas requiring heavy vehicle use only. A plan for grading and graveling shall be submitted for approval prior to construction.
3. All aggregates used in the site development shall be obtained from existing commercial sources.
4. Topsoil from grading and waste from foundation excavation shall be stockpiled and spread evenly over the ground within the WTG site area to blend with the natural topography after construction and to facilitate natural revegetation.
5. Fencing, if required by the Contractor for security, shall be limited to the immediate area of the WTG foundation and support equipment.
6. Existing county and approved site access roads shall be utilized. No new roads will be constructed without approval.
7. A dust abatement plan shall be submitted, including a program detailing the quantity and frequency of application of water for controlling fugitive dust.
8. Construction activities shall be performed by methods that will prevent accidental spillage of solid matter, contaminants, debris, and other pollutants and wastes. Such pollutants and wastes include, but are not restricted to, refuge, garbage, cement, concrete, oil and other petroleum products, and aggregate processing tailings.

9. After construction, the Contractor shall remove all solid waste and other refuse from the WTG site and dispose of it in a licensed area. No burning, dumping, or landfill activity shall be permitted onsite.

10. The Contractor shall comply with applicable Federal and State laws, orders, and regulations concerning the control and abatement of water and air pollution. The Contractor shall also comply with the sanitation requirements of Subpart D, Occupational Health and Environmental Controls, of the Department of Labor "Safety and Health Regulations for Construction," U.S. Government.

11. Two site plans shall be proposed on topographic maps. The first shall indicate the area and layout of equipment, stockpiles, erection facilities, and temporary buildings required during construction. The second plan shall illustrate the completed project including structures (including guy wires), roads, fences (if necessary), grading, and graveling.

12. Public Law 93-921, May 24, 1974, provides for the preservation of scientific, prehistorical, historical, and archeological data (including relics and specimens) which might otherwise be lost due to alteration of the terrain as a result of any Federal construction project.

a. The Contractor agrees that should he or any of his employees in the performance of this contract discover evidence of possible scientific, prehistorical, historical, or archeological data, he will notify the NASA Contracting Officer immediately in writing giving the location and nature of the findings.

b. Where appropriate by reason of a discovery, the NASA Contracting Officer may order delays in the time of performance and/or changes in the work. If such delays and/or changes are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clauses in the General Provisions of this contract.

c. The Contractor agrees to insert this paragraph in all subcontracts which involve the performance of work on the terrain of the site.

13. After construction, the Contractor shall seed the bared and scarred earth slopes and waste areas.

The following mixture is recommended:

Thickspike Wheatgrass	4 lb/acre
Western Wheatgrass	4 lb/acre
Big Sagebrush	1/8 lb acre
Four Winged Saltbrush	1 lb/acre
Rabbit Brush	1/8 lb acre

The seed should be sown in August or September. The grass should be drill seeded to a depth of one-half an inch or not greater than three-fourths of an inch. The shrub species can be broadcast sown. Supplemental watering will not be necessary unless it is an unusually dry year.

B. SPECIAL PROVISIONS RELATING TO INSTALLATION OF THE SVU

1. Superintendence By Contractor

The Contractor, at all times during performance and until the work is completed and accepted, shall give his personal superintendence to the work or have on the work a competent superintendent, with authority to act for the Contractor.

2. Conditions Affecting the Work

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve him from responsibility for successfully performing the work without additional expense to the Government. The Government assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of this contract, unless such understanding or representations by the Government are expressly stated in this contract.

3. Other Contracts

The Government may undertake or award other contracts for additional work, and the Contractor shall fully cooperate with such other

Contractors and Government employees. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor or by Government employees.

4. Cleanup

The Contractor shall at all times keep the construction area, including storage areas used by him, free from accumulations of waste materials or rubbish.

Prior to completion of the work, the Contractor shall remove from the vicinity of the work all plant facilities, building, rubbish, unused materials, concrete forms, and other like material, belonging to him or used under his direction during construction. All work areas shall be graded and left in a neat manner conforming to the natural appearance of the landscape.

In the event of the Contractor's failure to perform the above work, the work may be performed by the Government, at the expense of the Contractor, and his surety or sureties shall be liable therefor.

5. Safety and Health

a. The Contractor shall not require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by regulations of the Secretary of Labor, U.S. Government.

b. The Contractor shall comply with the Department of Labor Safety and Health Regulations for Construction promulgated under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C., 327 et seq.), as amended, and with the Water and Power Supplement thereto. Water and Power has published a handbook entitled "Construction and Safety Standards". This handbook shall be provided at no charge for use in connection with this contract by Water and Power.

c. The Contractor shall: (1) submit a proposed safety program prior to start of construction operations; (2) provide for weekly 5-minute "tool-box" safety meetings, conducted by his foremen and attended by all mechanics and laborers at the worksite; (3) conduct regularly scheduled safety meetings, at least monthly, for all levels of supervision; (4) provide adequate facilities and trained personnel to insure prompt and efficient first aid and medical care of injured employees - such facilities shall meet the requirements as set forth in the Water and Power Handbook, "Construction and Safety Standards"; and (5) designate a competent supervisory employee to carry out the Contractor's accident prevention program.

d. The Contractor is responsible for being cognizant of and insuring compliance with the requirements set forth in "Construction and Safety Standards". Such responsibility shall apply to both his operations and those of his subcontractors. When violations of the safety and health regulations are called to his attention by Water and Power personnel or their authorized representatives, the Contractor shall immediately correct the condition to which attention has been directed.

e. In the event the Contractor fails or refuses to promptly comply with the compliance directive issued under paragraph 5.d., above, the Water and Power personnel or their authorized representative shall notify the NASA Project Manager.

f. The Contractor shall maintain an accurate record of, and shall report to the Water and Power personnel all cases of death, occupational diseases, or traumatic injury to employees or the public involved, and property damage by accident in excess of $100 incident to performance of work under this contract.

g. The rights and remedies of the Government provided in this paragraph are in addition to any other rights and remedies provided by law or under this contract.

h. In the event there is a conflict between the requirements of this paragraph and any requirement of the U.S. Department of Labor in its regulation of the Construction Safety Act, the more stringent requirement shall prevail.

6. Sanitation

The Water and Power representative may establish sanitary rules and regulations for all forces employed under this contract.

7. Safety Precautions in Energized Facilities

No work shall be performed until authorization to proceed is obtained from the Water and Power inspector at the site of the work. All electrical work shall be performed under the observation of a Water and Power inspector and under the immediate supervision of a designated electrical foreman or supervisor qualified to supervise the type of work being performed. The job supervisor or foreman designated by the Contractor shall possess experience in the installation of electrical facilities and equipment, such as circuit breakers, transformers, switchgear, switches, structural towers or framework, and powerlines within or adjacent to electrical substations or switchyards.

Pursuant to Special Provision 5 (Safety and Health), above, the Water and Power inspector is authorized to notify the NASA Project Manager if, in his opinion, the work is being done in such manner as to endanger life, property, safety of the Contractor's employees or others, or electrical service. In addition, should the Contractor's designated electrical foreman or supervisor leave the worksite, all work shall be immediately suspended, and such suspension shall remain in effect until the electrical foreman or supervisor returns or another designated, qualified electrical foreman or supervisor arrives.

Deenergization of buses or equipment, protective grounding requirements, erection of safety barricades, and other safety requirements shall be as specified in Section 28 of Water and Power publication, "Construction and Safety Standards".

Work on energized circuits shall not be permitted. Outages will be made available at the request of the Contractor for work required on existing energized lines, buses, and equipment for specific phases of the work which is either dangerously close to energized buses or equipment, or for work involving modifications or probable hazards to relaying or control circuits or devices.

When an outage is desired, the Contractor shall submit a written request to Water and Power for deenergization, at least 10 days before the beginning of the work. The following information shall be furnished for the specific outage requested:

a. Area where work will be done (by number or other description).

b. Outline procedures for accomplishing the work including specific safety precautions to be taken, type and location of barricades, warning signs, and protective grounds and devices to be used.

c. Time the Contractor desires to start work.

d. Duration of the work.

e. Number of men and their classification.

f. Description of equipment to be used.

g. Information indicating that all required materials are on hand at the site, or data on shipping dates of materials not already at the site.

No specific request for an outage will be considered unless all materials and equipment required for the work will be at the site, and the Contractor will be prepared to perform the work on the date and during the period of time requested for the specific outage. If the Contractor finds that he will not be able to perform the work during an approved outage period, he shall immediately notify the NASA Project Manager of this fact.

Following approval of an outage, a Water and Power representative shall secure a Clearance which documents that the equipment to the worked on has been deenergized and isolated from hazardous sources of energy.

The Water and Power representative holding the Clearance will, in turn, review with the Contractor the limits of the deenergized working area and any special conditions pertinent to the Clearance. He shall review the safety precautions to be taken by the Contractor in the performance of the work.

After the circuit has been deenergized, the Water and Power representative holding the Clearance and the Contractor's authorized representative at the worksite shall inspect the worksite to verify the adequacy of the information on a Special Work Permit. The Special Work Permit shall specify what circuits and facilities have been deenergized, define the deenergized area, and any special conditions pertaining thereto.

The Water and Power representative and the Contractor's authorized representative at the worksite shall then sign the Special Work Permit authorizing the Contractor to proceed with the work. No work shall be done until a Special Work Permit has been signed, nor shall any work be done in an area not specifically covered by the Special Work Permit. After the Special Work Permit has been signed by both parties, and prior to commencement of any other items of work, the Contractor shall, under the observation of the Water and Power representative, "feel out" and ground all phases on both side of the work area. A hot stick shall be used to "feel out" and verify the fact that the circuit is deenergized. Grounding shall be done with hot-stick clamp-type grounds, placed and removed with a hot stick in accordance with Section 5 of the Water and Power's Power Systems Safety Standards.

Grounding cables shall be installed so that all phases of lines and apparatus are visibly and effectively shorted and connected to ground at a common point. Work on any phase of a multiphase line or apparatus on which only one phase is grounded is prohibited except that grounds may be removed for specific tests on equipment which require the bushings to be ungrounded, subject to the approval of the person holding the Clearance. Following the grounding, the Contractor shall place necessary barricades and take whatever other safety measures are necessary before proceeding with the work.

Where work must be performed in close proximity of energized facilities, and an outage on these facilities cannot be arranged, a Special Work Permit shall be issued specifying a Hot-Line Order for the energized facilities to insure against reenergization should accidental contact be made with an energized circuit.

The cost of all work described in this paragraph shall be included in the prices in the Contract Schedule, Articles VI and IX. No additional allowance above these prices in the Contract Schedule shall be made by reason of any nightwork, overtime, or other costs required in scheduling and performing the work as necessary to conform to the provisions of this paragraph.

8. Protection of Existing Installations

In performing work in the vacinity of, and in the existing portion of, the facilities, the Contractor shall take all necessary precautions to safeguard existing installations which are to remain in place. The Contractor shall obtain the location of buried conduit, pipe, cable, ground mat, and other buried items prior to performing any excavations in the existing installation, and shall use proper methods for their protection during excavating and backfilling operations. The Contractor shall protect adjacent installations when installing equipment and materials.

All protective installations shall be arranged so as to permit operation of the existing equipment and facilities by the Government while work under these specifications is in progress. The Contractor shall remove all protective installations provided by him after they have served their purpose. The materials furnished by the Contractor to provide protection shall remain the property of the Contractor. The Contractor shall be responsible for and shall repair, at his expense, any damage to existing Government installations due to the Contractor's operations or his failure to provide proper protection. The cost of all protection, as described in these specifications, including furnishing all necessary materials, shall be included in the prices in the Contract Schedule, Articles VI and IX.

ORIGINAL NASA CONTRACT FOR WIND ENERGY FACILITIES

Chairman HATFIELD. The committee would also like you to provide a copy of the contract, proposal, or agreement between DOE and NASA regarding the installation of 4-MOD-2 units at Goodnoe Hills.

Mr. BROADBENT. A copy of the NASA contract for installation of the Boeing units is supplied for the record.

[CLERK'S NOTE: The material can be found in the subcommittee files.]

SELECTION OF CONTRACTOR FOR VERIFICATION UNIT

Chairman HATFIELD. What procedures were followed in selecting the Hamilton-Standard unit and did Boeing submit a MOD-2 bid in competition with Hamilton Standard?

Mr. BROADBENT. A request for proposals was issued by Reclamation for competitive bids. The technical proposals were reviewed by a proposal evaluation committee consisting of personnel from both NASA and the Bureau. Each proposal was rated in accordance with the criteria set forth in request for proposals. Negotiations were held for both cost and technical matters to arrive at a best and final offer. The proposal evaluation committee submitted its finding to the source selection official from NASA who made a final selection decision which was concurred in by the Bureau's Commissioner. Boeing did submit a bid for the first systems verification unit.

Chairman HATFIELD. When was the Bureau first contacted regarding the purchase of the Boeing MOD-2 unit?

Mr. BROADBENT. NASA met with the Bureau's Commissioner Higginson on February 11, 1980, to make the proposal that DOE, NASA, and the Bureau consider a joint venture to construct the second systems verification unit using the surplus DOE MOD-2 parts.

Chairman HATFIELD. Why wasn't the installation of a second verification unit put out for competitive bid similar to the first unit?

Mr. BROADBENT. Since DOE had surplus Boeing MOD-2 parts valued at $1.5 million, it was determined that Boeing was the only contractor/supplier who could supply the remaining compatible parts and install the unit in a timely manner, and still be able to make effective use of the spare parts. Therefore, a request for competitive bids was not appropriate.

APPROVAL AND OBLIGATION OF FEDERAL FUNDS

Chairman HATFIELD. Turning to the November 14, 1980, letter regarding the proposal to reprogram funds for a second verification unit; was the Commissioner of the Bureau of Reclamation at that time, or anyone in the Bureau, aware of the committee's concern with the second unit and with oral responses from the committee staff, that the Bureau should not proceed until the matter had been presented during the hearing on the 1982 budget request in light of the new administration and new Congress having been elected?

Mr. BROADBENT. Yes, we were aware of the committee staff's concerns in ratifying Reclamation's actions in entering into a three-party agreement for installation of a second verification unit.

As we understood the committee staff's concern, it was a matter of awaiting new committee assignments of the new Congress rather than an objection to proceeding with the second unit per se.

Because of an existing contract between NASA and Boeing on the Goodnoe-Hills project, time was of the essence to exercise the option to produce the fourth unit at the quoted price and, therefore, realize the economies inherent in the existing contract.

Therefore, Commissioner Higginson made the decision to execute the agreement on January 13, 1981, the latest possible time to assure meeting the schedule allowed to exercise the option.

Chairman HATFIELD. Who gave the approval for the Bureau to enter into the agreement and obligate the Federal Government to the additional costs related to the second verification unit?

Mr. BROADBENT. Our justification to the congressional subcommittee on appropriations by letter of November 14, 1980, and no response within 9 weeks, constituted what Commissioner Higginson thought was adequate authority to obligate funds in fiscal year 1981. Support for the program from the new administration was indicated when President Reagan requested funds for the project in his March 1981 revised budget for fiscal year 1982. Future obligations relative to the second systems verification unit were recognized as contingent upon congressional appropriations as stated in the three-party agreement among Reclamation, DOE, and NASA.

Chairman HATFIELD. Provide a copy of all Department of the Interior and Reclamation correspondence regarding the request for approval to reprogram funds for the second systems verification unit.

Mr. BROADBENT. Copies of the correspondence are being provided for the record.

[The information follows:]

FAXOGRAM FROM D. W. WEBBER, ACTING REGIONAL DIRECTOR, LOWER MISSOURI REGION, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

7-1826 (11-71)
Bureau of Reclamation

Author-Typist-Date
GMWendler:dmo:6/17/80

Blind Copy
LM-700
LM-320, Wendler, Chavez

Transmitted
Operator
Date JUN 18 1980
Time

OFFICIAL FILE COPY

Date	Surname	Code	Date	Surname
6/17		320		
6/17		700		
		600		
		105		
		100		

FACSIMILE TRANS

IN REPLY REFER TO: LM-320

FAXOGRAM

To: Commissioner, LWP, Washington, DC, Attention: 710

From: Acting Regional Director, LWP, Denver, CO

Subject: Funds - Availability for Additional System Verification Unit (SVU) - Wind-Hydroelectric Energy Project

The following information is furnished in response to your telephone request of June 16, 1980, regarding a source of funding for an additional SVU at Medicine Bow, Wyoming.

Fiscal Year 1980

Surplus funds of $1,000,000 are expected. However, we have been requested by Assistant Commissioner Anderson's memorandum of May 30, 1980, to reserve $500,000 of this surplus for future withdrawal to fund the pending construction and rehabilitation supplemental appropriation.

Fiscal Years 1981 and 1982

The transfer of $1,000,000 in fiscal year 1980 will not impact the budget for fiscal years 1981 or 1982, nor are there any surplus funds in the programs for this period.

For your consideration, following is the preliminary estimate of the total funds required by years.

1980	$1,000,000
1981	2,300,000
1982	1,400,000
Total	$4,700,000

LETTER FROM LARRY E. MEIEROTTO, ASSISTANT SECRETARY OF THE INTERIOR

19 AUG 1980

Honorable James T. McIntyre
Director, Office of Management
  and Budget
Washington, DC 20503

Dear Mr. McIntyre:

Enclosed for your consideration is an amendment to the fiscal year 1981 budget request of the Water and Power Resources Service (Water and Power), Department of the Interior, for an additional $1,300,000 under the "General Investigations" appropriation.

Water and Power plans to initiate work in fiscal year 1980 to enable installation of a second wind turbine at Medicine Bow, Wyoming, to produce marketable peaking energy to conserve oil and relieve initial shortages in the 1980's. This can be achieved by utilizing surplus funds in fiscal year 1980 and 1981 available from within the Wind Hydroelectric Energy Project investigation, a line item in our General Investigation program. To fund the remaining requirements for fiscal year 1981, we are proposing this budget amendment that will utilize surplus funds from the Colorado River Basin Salinity Control Project, Title I.

The National Aeronautics and Space Administration (NASA) through funding from the Department of Energy (DOE) has a contract with the Boeing Company to install up to four MOD-2 wind turbine-generator units. NASA and DOE have exercised their option to install three of the four units and offered Water and Power the manufactured parts for the fourth unit. The parts would be tranferred to Water and Power in exchange for wind data, engineering services, and test data from Water and Power wind data investigations and from the operation of wind energy units. No exchange of funds would be required for the fourth unit parts. The total cost of the installation and operation of the unit is estimated to be $4,000,000. The unit would be installed in fiscal year 1981.

Installation and operation of the MOD-2 unit would be the second Systems Verification Installation (SVI) at Medicine Bow, Wyoming. It would provide the Federal Government with important side-by-side comparison of two different wind turbine designs. The first SVI will be a Hamilton-Standard unit currently under construction by Water and Power. Both units would be scheduled for operation by the end of fiscal year 1981 with operational testing beginning in fiscal year 1982. Also, the operation of more than one unit will provide valuable test information on electrical stability and control parameters while both units are in operation, plus providing information on spacing distance requirements between units. This information will be extremely valuable to assist studies underway for a multi-unit wind farm installation near Medicine Bow. In addition the parts for the MOD-2 unit are immediately available and any delay in commitment could jeopardize their availability to Water and Power. The DOE and NASA fully support the installation of the fourth MOD-2 unit by Water and Power at Medicine Bow, Wyoming.

The needed funding and sources of funds are as follows:

Item	FY 1980 Budget	Proposed FY 1981 Budget	Amended FY 1981 Budget	Increase
Wind Hydroelectric Energy Project	$4,546,000	$5,113,000	$6,413,000	$1,300,000
(1) Wind Hydroelectric Energy Integration Study	(506,000)	(113,000)	(113,000)	(0)
(2) System Verification Installation a/ b/	(4,040,000)	(5,000,000)	(6,300,000)	(1,300,000)
a/ SVI #1	3,040,000	5,000,000	4,000,000	
b/ SVI #2	1,000,000	0	2,300,000	

In fiscal year 1980, funds are available from the Wind Hydroelectric Energy Project in the amount of $1 million to initiate work on the second SVI.

Funding requirements for fiscal year 1981 are $2,300,000 for the second SVI. This amount can be funded by utilizing $1 million from the Wind Hydroelectric Energy Project and by a budget amendment of $1,300,000. The additional wind energy funds are available because the contract for the Hamilton-Standard Unit (SVI No. 1) was less than anticipated. Therefore, utilization of these funds for the second SVI will not delay the installation of the first SVI. To enable operational testing $650,000 is required in fiscal year 1982 and $50,000 is required in fiscal year 1983.

We propose to obtain the needed $1,300,000 from anticipated surplus funds in the Colorado River Basin Salinity Control Project, Title I, because the prime contract for the desalinization plant has been delayed.

A similar letter has been prepared to be transmitted to the Chairmen of the Subcommittees on Energy and Water Development, Committee on Appropriations of the United States Senate and the House of Representatives as soon as the amendment has been signed by the President.

Sincerely,

(sgd) Larry E. Meierotto

ASSISTANT
SECRETARY

DEPARTMENT OF THE INTERIOR

Water and Power Resources Service

GENERAL INVESTIGATIONS

Fiscal Year 1981:

Request Pending	$37,825,000
Proposed Amendment	1,300,000
Revised Request	39,125,000

Through the proposed amendment of the budget an amount of $1,300,000 will be made available in the fiscal year 1981 program to enable installation of a second wind turbine at the Medicine Bow, Wyoming, site under the Wind-Hydroelectric Energy Project in the General Investigations appropriation. Presently the fiscal year 1981 program provides $5,000,000 for a single wind turbine generator included in the budget sub-item System Verification Installation. No provisions were made for the installation of a second wind turbine generator at Medicine Bow.

Under the amendment, fiscal year 1981 funding will allow for purchase and installation of a Boeing (MOD-2) wind turbine generating unit under a Department of Energy (DOE) program which includes a National Aeronautics and Space Administration (NASA) administered contract with the Boeing Company. The Service recommends the purchase of the Boeing (MOD-2) because it would provide the Federal government with important side-by-side comparisons of two different wind turbine designs with both units being scheduled for operation by the end of fiscal year 1981. Also, the operation of more than one unit will provide valuable test information on electrical stability and control parameters while both units are in operation plus providing information on spacing distance requirements between units.

The total cost of the installation and operation of the unit is estimated to be $4,000,000 and would be completed in fiscal year 1982. This amount can be funded by following: utilizing $1,000,000 awarded funds from the Wind Hydroelectric Energy Project in fiscal years 1980 and 1981; by this budget amendment of $1,300,000 and with the remaining funds coming from fiscal year 1982. We propose to obtain the needed $1,300,000 from anticipated surplus funds in the Title I, Colorado River Basin Salinity Control Projects.

MEMORANDUM FROM D. W. WEBBER, ACTING REGIONAL DIRECTOR, LOWER MISSOURI REGION, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

OCT 2 9 1980

Memorandum

To: Commissioner

From: Acting Regional Director

Subject: Funding For The Wind Energy Program

It was recognized at the August 1980 Program Conference that acquisition and installation of the SVU-2 would cost $4,000,000 with $3,300,000 required through fiscal year 1981. It was proposed that $1,300,000 be transferred from the other Service funds to the project to supplement funds that were available in the General Investigations Program for the LM Region.

As a result of congressional action in the fiscal year 1981 appropriations bill, the fund availability for such a transfer is questionable. However, our recent reevaluation indicates that we can still fund the SVU-2 acquisition in fiscal year 1981 by:

1. Limiting the fiscal year 1981 SVU-1, Hamilton Standard, contract obligation to $1,500,000 based on estimated expenditures rather than the full contract balance of $2,950,000. With the $1,901,817 of undelivered orders from fiscal year 1980, this would provide over $3,400,000 for Hamilton Standard in fiscal year 1981.

2. Limiting the fiscal year 1981 SVU-2 Boeing contract obligation to about $1,500,000 based on our current projection for a contract award.

3. Utilizing other available fiscal year 1981 General Investigations funds in the approximate amount of $300,000.

Assuming both contractors meet their flags in fiscal year 1982, we will then be faced with a funding deficit in the estimated amount of $2,155,000 for fiscal year 1982 and $727,000 in fiscal year 1983. This includes costs which are not part of the two primary contracts but are significant related activities/charges such as E&R Center support, other contracts, and noncontract costs.

In addressing the fund availability for the SVU-2, we suggest the following actions:

1. Notify the appropriate congressional committees that Water and Power intends to adjust fiscal year 1981 General Investigations funds to purchase a second system verification unit unless there are congressional objections.

2. Identify a fiscal year 1982 and 1983 shortage of about $2.9 million. The Service can better address the fund requirements after the SVU-2 contract has been signed which will have occurred by the time of the appropriation committee hearings in the spring of 1981.

D. W. Webber

Memorandum From R. E. Martin, Regional Director, Lower Missouri Region, Water and Power Resources Service, Department of the Interior

NOV 0 5 1980

Memorandum

To: Commissioner
Attention: 710

From: Regional Director

Subject: Fiscal Year 1981 General Investigation Funds Available for the Wind Hydroelectric Energy Project

Please refer to our memorandum of October 29, 1980, indicating that approximately $300,000 could be made available to the Wind Hydroelectric Project through adjustments in the LM Region FY 1981 General Investigations Program.

The following details the expected sources of those funds:

Program Item	Total Available
Little Blue Unit, Nebraska	$170,000
Environmental & Interagency Coordination Activities	$ 55,000
North Platte Project R&B, NE, WY (Investigation of Existing Projects)	$ 75,000
Total	$300,000

We are not initiating such adjustments, however, until pending Wind Energy program details are finalized.

R. E. MARTIN

Faxogram From Aldon D. Nielsen, Acting Assistant Commissioner, Water and Power Resources Service, Department of the Interior

FAXOGRAM

27 FEB 1981

To: Regional Director, LWP, Denver, Colorado

ACTING ASSISTANT
From: Commissioner, LWP, Washington, D.C. Aldon D. Nielsen

Subject: Fiscal Year 1981 Fund Transfer - General Investigations, Plan Formulation, Change Order LM06

The subject change order is approved and returned for distribution.

This change order allows for an intraregional transfer to meet specific needs within your General Investigation program. Additional funds of $300,000 are needed for the Wind Hydroelectric Energy Project. You report that these funds are required to aid in the acquisition and installation of the second wind turbine unit. The needed funds are available from surplus funds in the Little Blue Unit ($170,000), Investigations of Existing Projects - North Platte Project R&B ($75,000), and Environmental and Interagency Coordination Activities ($55,000). The net affect of the fiscal year 1981 fund changes in your regional program is zero.

PROGRAM CHANGE ORDER

LM06

Region LM	Project (type in caps) General Investigations
Sheet 1 of 2	Change Order No. G.I. Proj.(Abrev.) 81 FY ___ No. G.I. Activity

To d to revise programs for changes in plan, schedules, funds, or
ob; . Do not use to reflect program delays, lack of accomplishment
or ability to perform work.

Su. , tabulation of changes:

	FY 1981	FY 1983	Estimated Total
Feasibility Investigations			
Little Blue Unit	-170,000		-170,000
North Platte Project R&B	- 75,000	+75,000	
Environmental & Interagency Coordination Act.	- 55,000	+55,000	
Wind-Hydroelectric Energy Project	+300,000	-300,000	
(2) System Verification Installation	(+300,000)	(-300,000)	

Justification (Describe and explain the need for the change order):

A funding increase of $300,000 is required for the Wind-Hydroelectric Energy Project, System Verification Installation to help meet funding requirements for the acquisition and installation of the second wind turbine unit (SVU-2).

*All changes internal; no additional allotment is required.

~~Detailed Schedule~~

The details of this change order are as follows: (Data to be reported below should include all revisions associated with the change order including changes in irrigation, power or M&I water goals; construction and preconstruction bars and flags, completion dates and monetary amounts. All totals revised by this change order must be shown so that the documents as revised will remain in complete arithmetic balance.)

Condensed Schedule
Dated 8-6-80
Revised 11-3-80

Sheet No.	Line No.	Col. No.	From	To	Sheet No.	Line No.	Col. No.
i Blue - est. total			541,421	371,421	1	4	3
it Blue - FY 1981			255,000	85,000	1	4	5
ind-Hydro - FY 1981			7,099,000	7,399,000	1	7	5
ind-Hydro - FY 1983			3,562,500	3,262,500	1	7	7
?) SVI - FY 1981			(6,929,000)	(7,229,000)	1	9	5
?) SVI - FY 1983			(3,562,500)	(3,262,500)	1	9	7
b.Feasibility est.total			20,759,026	20,589,026	1	11	3
b.Feasibility-FY 1981			7,618,000	7,748,000	1	11	5
b.Feasibility-FY 1983			3,982,500	3,682,500	1	11	7
rth Platte - FY 1981			358,000	283,000	1	19	5
rth Platte - FY 1983			89,500	164,500	1	19	7
CA - FY 1981			640,000	585,000	2	4	5
CA - FY 1983			485,000	540,000	2	4	7
b.Spec. - FY 1981			2,722,000	2,592,000	2	6	5
b.Spec. - FY 1983			1,662,500	1,792,500	2	6	7
tal Plan - Est. total			34,800,466	34,630,466	2	7	3
tal Plan - FY 1983			5,645,000	5,475,000	2	7	7
ost - Est. total			34,800,466	34,630,466	2	9	3
ost - FY 1983			5,645,000	5,475,000	2	9	7
al Exp. -Est. total			41,427,899	41,257,899	2	12	3
al Exp. - FY 1983			5,645,000	5,475,000	2	12	7
al Obligations-Est.total			41,427,899	41,257,899	2	15	3
al Obligations-FY 1983			5,645,000	5,475,000	2	15	7
otment Required FY 1983			5,645,000	5,475,000	2	20	7

IEW and APPROVAL: (Approval by the Commissioner is required if revision includes change in rate of irrigation, power I water development, changes in plan, inclusion of new program items, start of previously unprogramed work, acceleration rk program set forth in appropriation justifications, or changes in allotment of funds. Otherwise, approval can be by Regional ctor.)

mmended Operating Office Head — Date 2/11/81	Recommended Regional Director — Date 2-12-81
ed (If to be approved by Commissioner) SGD. WILLIAM G. KLOSTERMEYER Chief, Division of P.C.&F. — Date FEB 1981	Approved Aldon D. Nielsen Commissioner or Regional Director (cross out one) — Date 27 FEB 1981 ACTING ASSISTANT

GPO 840344

MEMORANDUM FROM D. W. WEBBER, ACTING REGIONAL DIRECTOR, LOWER MISSOURI REGION, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

MAR 5 1981

To: Commissioner, LWP, Washington, DC, Attention: 300

From: ASSISTANT Regional Director, LWP, Denver, CO

Subject: Request for Additional Funding - Fiscal Year 1981 - General Investigations

1. Project Name and Appropriation: Wind Hydroelectric Energy Project, G.I.

2. Amount Needed: $1,010,000

3. Justification of Need: Additional funds are required to meet funding requirements for the acquisition and installation of the second wind turbine under the Wind Hydroelectric Energy Project, System Verification Installation.

4. Source of Funds and Justification for Availability: Commissioner's office to provide the additional funds.

5. Program Change Order Number: LM22

6. For Additional Information Contact: Gordon M. Wendler

7. Critical Date: May 1981

D. W. Webber

MEMORANDUM FROM ALDON D. NIELSEN, ACTING ASSISTANT COMMISSIONER, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

10 MAR 1981

Memorandum

To: Regional Director, Denver, Colorado

ACTING ASSISTANT

From: Commissioner

[illegible] Nielsen

Subject: Fiscal Year 1981 Fund Transfer - General Investigations

In your correspondence of March 5, 1981, you requested that $1,010,000 be made available for plan formulation activities of the Wind Hydroelectric Energy Project. You report that these funds are required for the acquisition and installation of the second wind turbine.

It is proposed to transfer funds from Washington office's Research programs, General Planning Studies and Advanced Scientific and Technological Applications, to meet your needs. This transfer will require departmental approval. You will be advised when such approval is received and the transfer will be approved at that time.

Faxogram From William G. Klostermeyer, Acting Assistant Commissioner, Water and Power Resources Service, Department of the Interior

FAXOGRAM

MAR 23 1981

To: Regional Director, LWP, Denver, Colorado

From: [illegible] ASSISTANT Commissioner, LWP, Washington, D.C.

Subject: Fiscal Year 1981 Fund Transfer - General Investigations

My memorandum of March 10, 1981, notified you that departmental approval was needed to transfer $1,010,000 from research to a plan formulation activity. We received that approval on March 17, 1981.

You requested that $1,010,000 be made available for plan formulation activities of the Wind Hydroelectric Energy Project. You report that these funds are required for the acquisition and installation of the second wind turbine.

This transfer is approved and the needed funds will be made available to you from surplus research funds in the Washington office. Please submit a program change order (Form PF-5) citing this correspondence as your approving authority. Reapportionment documents will follow shortly.

[illegible]

cc: E&R Center, Code D-363

Note to E&R Center, Code D-363 Transfer of $1,010,000 will be made from Washington office, Advanced Scientific and Technological Applications ($760,000) and General Planning Studies - Interregional and Training Activities ($250,000).

Memorandum From D. W. Webber, Acting Regional Director, Lower Missouri Region, Water and Power Resources Service, Department of the Interior

SEP 22 1981

To: Commissioner
Attention: 710

From: ASSISTANT Regional Director

Subject: Request for Funds - Fiscal Year 1981

We are requesting a funding increase of $450,000 to meet contractual requirements on the Wind-Hydroelectric Energy Project.

D. W. Webber

MEMORANDUM FROM WILLIAM G. KLOSTERMEYER, ASSISTANT COMMISSIONER, WATER AND POWER RESOURCES SERVICE, DEPARTMENT OF THE INTERIOR

SEP 28 1981

Memorandum

To: Regional Director, Denver, Colorado

From: ASSISTANT Commissioner

Subject: Fiscal Year 1981 Fund Transfer - General Investigations, Plan Formulation

In your correspondence of September 22, 1981, you requested that $450,000 be made available for use on the Wind-Hydroelectric Energy Project, a plan formulation activity. The funds are needed for the acquisition and installation of the second wind turbine unit.

This transfer is approved. Surplus plan formulation funds have been identified in PN, MP, UM regions and Washington office to cover the needed increase. Please submit a program change order (Form PF-5) citing this correspondence as your approving authority. Reapportionment documents will follow shortly.

SGD. [illegible] G. KLOSTERMEYER

LETTER FROM ROBERT N. BROADBENT, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

JAN 25 1982

Honorable Mark O. Hatfield
Chairman, Subcommittee on Energy
and Water Development

Dear Senator Hatfield:

At a January 8, 1982 meeting of the subcommittee staff, the National Aeronautics and Space Administration, and the Bureau of Reclamation, the termination (as directed by the conference report 97-345 for fiscal year 1982 Energy and Water Development Appropriations Act) and mothballing of the second system verification unit, Wind-Hydroelectric Energy Project, Wyoming, were discussed. It was agreed that Reclamation provide the subcommittee with a document which arrays options for making the unit operational and therefore revenue producing.

By this letter, we request your concurrence in delaying permanent mothballing of the second unit until such an option document is reviewed. This request is predicated on the fact that the unit is erected, fully assembled, and ready for testing and acceptance, a $5.7 million Federal investment, which could be made operational with additional expenditures of approximately $1 million spread between fiscal years 1982 and 1983. Once operational, potential energy power revenues of up to $320,000 annually could be realized.

Sincerely yours,

(Sgd) Bob Broadbent

Letter From the Secretary of the Interior

MAR 4 1982

Honorable Mark O. Hatfield
Chairman, Committee on Appropriations
Room S-128, U.S. Capitol
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Enclosed is the Program Decision Option Document from the Bureau of Reclamation regarding the completion of the second system verification unit (SVU-2) of the Wind-Hydroelectric Energy Project, Wyoming, referred to in our letter of January 25, 1982.

We recommend option 1, which proposes reprogramming of General Investigation funds in fiscal year 1982 in the amount of $440,000 and a budget adjustment totaling $373,000 in fiscal year 1983 as the most feasible approach to federally funding the completion of the SVU-2. Funds in the amount of $689,000 have been transferred to the program under the Secretary's transfer authority, and are being utilized to cover costs incurred under the contract with Hamilton Standard for the first system verification unit.

Funds in the amount of $440,000 are available from within the General Investigations program as follows:

1. $60,000 from minor work on completed projects due to anticipated savings in the review of feasibility reports.
2. $279,000 from Investigation of Existing Projects and $101,000 from General Planning studies due to the probability of unidentified new studies not developing.

This program change is being transmitted to you in accordance with the agreement and understanding the Department has with both the House and Senate Committees on Appropriations with regard to reprogramming funds which exceed our transfer authority for each project. A similar letter has been sent to the Chairman, Subcommittee on Energy and Water Development, Committee on Appropriations, House of Representatives.

Sincerely,

SECRETARY

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

PROGRAM DECISION OPTION DOCUMENT

Second Wind Turbine System Verification Unit
Medicine Bow, Wyoming

February 1982

ISSUE

Funding options to complete the second System Verification Unit (SVU)

OPTIONS

1. Congressional Appropriations Committees authorize Bureau reprogramming authority for fiscal year 1982 funds and adjust the fiscal year 1983 budget request.

2. Congress provide fiscal year 1982 supplemental appropriations and increase the 1983 budget.

3. Congress increase fiscal year 1983 budget request.

4. Non-Federal funding.

BACKGROUND/ANALYSIS

This issue entails providing funds to test and perform acceptance on the completely assembled second SVU wind turbine to make it revenue producing rather than expending annual dollars to secure and maintain (mothball) the unit.

The authority used to jointly construct with the Department of Energy (DOE) and the National Aeronautics Space Administration (NASA) the second wind turbine unit (Boeing MOD-2) was the interdepartmental work provision of 47 Stat. 417 (31 U.S.C. Section 686).

DOE had surplus MOD-2 wind turbine parts valued at $1.5 million from the Goodnoe Hills program. DOE, NASA, and the Bureau recognized the mutual benefits of installing a Boeing MOD-2 unit at the Medicine Bow, Wyoming, site near the Hamilton Standard unit to provide comparative operating data on two large wind turbines of different design. The appropriate congressional committees in both houses were advised by letter of November 14, 1980, that due to slippage on the first system verification unit, funds were available in 1981 to initiate the procurement of the additional MOD-2 parts and installation cost to assemble a complete unit. Nine weeks later, we executed the three-party interagency agreement between the Bureau, DOE, and NASA, to proceed with purchase of the unit. Neither the House Appropriation Committee nor the Senate Appropriation Committee responded to our November 14, letter with regard to proceeding with the second SVU.

Congress provided fiscal year 1982 appropriations of $1,500,000 for the system verification installation of the Wind-Hydroelectric Energy Project. This is approximately 50 percent of the $3,040,000 requested in the President's budget. Furthermore, the conference report instructed the Bureau to terminate activities on the second system verification unit (Boeing MOD-2 unit).

The unit is completely assembled and first mechanical rotation tests performed. Work remaining to make the unit operational is electrical checkout and acceptance testing.

Boeing has completed option 5b of the NASA contract, which provided field construction through first rotation. The Bureau has advised NASA not to exercise option 5c, which would provide for the electrical checkout and acceptance. Boeing has removed all construction equipment and tools from the site and will do some minor cleanup work in February, which will complete all field work authorized.

NASA has negotiated an extension of time to the existing Boeing contract to exercise the fixed price option 5c by the end of June 1982 to complete checkout and acceptance. If funding is not available before this date, the Bureau will have to negotiate a new contract with Boeing to complete the unit, probably at a higher cost due to the delay.

Since the unit is completely assembled, there is a need to either continue with the work to make it operational or to protect it from damage and deterioration which will be an annual expense. It is estimated that the cost to provide the required "mothballing" will be $90,000 in fiscal year 1982 and $55,000 annually thereafter. If made operational, the unit would yield revenues of up to $320,000 annually through the sale of energy (8,000,000 kW hours at a rate of 40 mills).

Funding to complete and operate the unit is needed for the following activities:

1. Boeing contract to perform acceptance testing

2. NASA support

3. O&M support contract including spare parts and special tools

4. Bureau engineering and maintenance support

Funding estimates do not include any contingency or estimates to cover emergency repairs or field modifications.

The installation of the units is extremely important to verify that integration of the wind and hydroelectric systems is a viable concept for future energy technology development. Further, the completion of the second unit would provide the industry with valuable side-by-side comparison of two different wind turbine designs when the Hamilton Standard 4-MW unit is completed late 1982.

DISCUSSION OF OPTIONS

OPTION 1. Congressional Appropriations Committees authorize Bureau reprogramming authority in the amount of $440,000 in fiscal year 1982 and to adjust the fiscal year 1983 budget request by the amount of $373,000.

Funding Summary:

Assume that reprogramming authority would be obtained in time to resume work by June 1, 1982.

	Fiscal year 1982	Fiscal year 1983
Complete checkout and acceptance (NASA/Boeing Contract Option 5c)	$375,000	$
NASA support	25,000	25,000
O&M support contract		265,000
Engineering and maintenance support (Bureau)	40,000	83,000
	$440,000	$ 373,000

Total through fiscal year 1983 -	$ 813,000
Total costs through 2 years of operation -	$1,000,000

Arguments for:

a. Least total cost through 2 years of operation

b. Minimum expense incurred to secure machine

c. Existing NASA/Boeing contract will be used for checkout and acceptance, thus no additional expense will be incurred from writing and negotiating a new contract

d. Does not cause an increase in fiscal years 1982 or 1983 budgets

e. Unit starts producing income from sale of energy prior to high wind months and at earliest possible date

f. Visibility of unit reverts to a positive position

g. Least delay in acquiring test data available from operating wind turbine unit

Arguments against:

a. Splitting of funds between two fiscal years creates less flexibility to cover unforeseen events

b. Probable negative impacts on lower priority Planning Studies

OPTION 2. Congress provide fiscal year 1982 supplemental appropriation in the amount of $380,000 and increase fiscal year 1983 budget in the amount of $466,000.

Funding Summary:

Assume that work would resume in August 1982 using new Bureau negotiated contract.

	Fiscal year 1982	Fiscal year 1983
Complete checkout and acceptance (new Bureau/Boeing contract)	$347,000	$ 78,000
NASA support	10,000	40,000
O&M support contract		257,000
Engineering and maintenance support (Bureau)	23,000	91,000
	$380,000	$ 466,000

Total through fiscal year 1983 - $ 846,000

Total cost through 2 years of operation - $1,060,000

Arguments for:

a. Does not affect funding of other programs

b. Puts unit on line just before high wind months, thus loss of revenue minimized

c. Visibility of unit reverts to a positive position

d. Small delay in acquiring test data available from operating wind turbine unit

e. No probable negative impact on lower priority Planning studies

Arguments against:

a. Causes an increase in fiscal year 1982 and 1983 Federal budgets

b. Delay causes increase in total cost through 2 years of operation

c. Cost to complete checkout and acceptance will be higher because of need to write and negotiate new contract between Bureau and Boeing

OPTION 3. Congress increase fiscal year 1983 budget in the amount of $812,000.

Funding Summary:

Assume that work will resume on October 1, 1982.

	Fiscal year 1983
Complete checkout and acceptance (new Bureau/Boeing contract)	$ 425,000
NASA support	50,000
O&M support contract	248,000
Engineering and maintenance support (Bureau)	89,000
	$ 812,000
Total through fiscal year 1983	$ 812,000
Total cost through 2 years of operation -	$1,075,000

Arguments for:

a. No affect on fiscal year 1982 budget

b. Visibility of unit reverts to a positive position

c. No probable negative impact on lower priority Planning studies

Arguments against:

a. Causes an increase in fiscal year 1983 Federal budget

b. Delay causes increase in total cost through 2 years of operation

c. Cost to complete checkout and acceptance will be higher because of need to write and negotiate new contract between Bureau and Boeing

d. Machine will go on line approximately 11 months from original schedule with corresponding delay in data collection and loss of revenue from energy sales

OPTION 4. Non-Federal funding. Secure from the State of Wyoming, utilities, or a private company funds in the amount of $1,075,000 to complete and operate the machine for 2 years. This represents an increase of $75,000 over previous estimates due to a delay from January 31, 1982, to October 1, 1982, in the anticipated date of an agreement with a non-Federal entity, if one can be found.

Funding Summary:

Assume that work will resume October 1, 1982, Funding breakdown same as Option 3.

Preliminary contact has been made with Boeing Engineering and Construction Company, the State of Wyoming, and utility companies. Boeing was receptive but not optimistic because of the current cash flow position of the Company The State of Wyoming will pursue the matter further if Federal funds cannot be restored. Only interest inquiries have been made of the utilities. They were receptive but have not been given any cost/revenue breakdown.

If the non-Federal funding were arranged, the reimbursement of the cost-sharing funds, with interest, provided by the non-Federal entity would be made either from the sale of power from the unit or the allocation of a proportional share of the power, thus reducing the total revenues received by the Bureau.

Arguments for:

a. Does not cause an increase in Federal budget

b. Follows the President's desire to cost-share Federal projects

c. Visibility of unit reverts to a positive position

Arguments against:

a. Loss of revenue during repayment period on non-Federal funds with interest

b. Cost to complete checkout and acceptance will be higher because of need to write and negotiate new contract between Bureau and Boeing

c. Uncertainty of acquiring a participant may result in substantial delays which will require additional Federal outlays to mothball the unit

d. Proprietary rights/access to the test data generated from operational machine would prohibit dissemination of the valuable information to the industry at-large

COMMENCEMENT OF INSTALLATION

Chairman HATFIELD. When did work first begin on the installation of the second system verification unit?

Mr. BROADBENT. NASA signed the Boeing contract supplemental on April 23, 1981, and Boeing started the site work at Medicine Bow on April 27, 1981.

INTERPRETATION OF COMMITTEE ACTION

Chairman HATFIELD. In May 1981, the U.S. Senate ratified the committee recommendation which denied a supplemental request to transfer funds to install a second wind turbine generator at Medicine Bow, Wyo. Why wasn't this committee action sufficient notice that the project had not been fully cleared and that caution should be used or work should be terminated, or at least held in abeyance, until congressional approval was granted?

Mr. BROADBENT. The Bureau interpreted the committee's May 1981 action to mean that additional funds "new money" would not be made available in fiscal year 1981. That is, unless we could fund the activity from within our existing budget, work could not proceed or continue, at least not at the rate previously planned. By the spring of 1981, further slippage on the Hamilton-Standard unit had occurred which made funds available for continued progress on the Boeing MOD-2 unit.

COMPLETION COST

Chairman HATFIELD. What is the current total estimated cost for the Hamilton-Standard unit, what costs have been incurred to date, and what is the remaining cost to complete work connected with that unit?

Mr. BROADBENT. I will furnish that information for the record.

[The information follows:]

Summary of costs for completion and operation of Hamilton-Standard unit

Cost to date (Feb. 28, 1982)	$9,070,000
Estimate to complete construction	1,882,000
Estimate for 2 years of operation	2,622,000
Total estimated cost through 2 years of operation	13,574,000

ANNUAL PRODUCTION FROM OPERATION OF UNIT

Chairman HATFIELD. Now, the supporting material accompanying the Department's request indicates the second unit would produce revenues of up to $320,000 annually through the sale of power. What is the basis of these projections? Are these revenues from the operation of the wind-hydro system or the wind unit only?

Mr. BROADBENT. The Bureau has collected wind data at the Medicine Bow site for several years. Using that wind data, together with the Boeing MOD-2 performance curve, the average annual energy production from the machine is calculated to have the potential of 8 million kWh. Operating the unit interconnected with the hydrosystem has a present supplemental power value of up to 40 mills per kWh; therefore, the annual sale of power could be up to $320,000 from the wind unit only.

COST OF COMPLETION AND 2-YEAR OPERATION OF UNIT

Chairman HATFIELD. What is your estimate of the full and total cost, both direct and indirect, including contingencies, to complete checkout and acceptance testing, and the 2-year operational program? Provide a detailed breakout for the record of the costs for acceptance testing; NASA support, including the number of people and amount supporting NASA personnel; the nature of the O. & M. support identifying specifically the spare parts and special tools needed; and the nature of the remaining Bureau of Reclamation engineering work.

Mr. BROADBENT. I will submit for the record a breakdown of estimated costs to complete and operate the Boeing unit for 2 years. The figures do not include contingencies or emergency repair costs.

[The information follows:]

Itemization of costs for completion and operation of Boeing unit

Boeing contract option 5C to complete checkout and acceptance	$375,000
NASA support:	
3½ man-months of support during checkout and acceptance	20,000
5½ man-months of support during 2 years of operation	30,000
Travel costs	10,000
Subtotal	60,000
O. & M. support contract:	
Initial set of spare parts	100,000
Replacement of spare parts ($25,000/year)	50,000
Special tools	25,000
O. & M. support ($8,125/month)	195,000
Subtotal	370,000
Bureau engineering and maintenance support:	
Support during checkout and acceptance testing	40,000
O. & M. support	125,000
Data collection and analysis	30,000
Total	1,000,000

EXTENDED RESEARCH PROGRAM

Chairman HATFIELD. Is there any consideration being given to an extended research or operational program beyond the 2-year period indicated in the March 4, 1982, letter to the committee? If there is, how would this effort be funded?

Mr. BROADBENT. There are no plans to extend the verification system beyond the 2-year period on either of the systems verification units. If the 100-mW wind turbine field is authorized, the two systems verification units will be operated as part of the total project. If the project is not authorized, we will seek other methods of funding through the operation and maintenance appropriation and/or non-Federal funds to continue in a power production mode only.

PROGRAM FUNDING ALTERNATIVES

Chairman HATFIELD. What efforts are being undertaken by the Department or the Bureau to identify and assist potential non-Federal entities in the review of this project as an alternative to continue Federal funding?

Mr. BROADBENT. The Bureau has contacted the Boeing Engineering & Construction Co., the State of Wyoming, and several of the power companies served by the hydrosystem about cost sharing the remaining funding to complete the second systems verification unit. None of these entities are willing to make a commitment at this time.

Chairman HATFIELD. Why were funds not included in the fiscal year 1983 budget to complete the work on the second verification unit?

Mr. BROADBENT. The budget justification did not include funds for the second system verification unit because of the congressional action on the fiscal year 1982 budget directing Reclamation to terminate the second system verification unit.

CONSTRUCTION NEW STARTS

Chairman HATFIELD. Mr. Secretary, your statement also says that the fiscal 1983 budget anticipates construction new starts for the Bureau of Reclamation and appropriations will be requested for projects that meet the administration's criteria for non-Federal financing.

What is your concept of Federal participation in water resource projects?

Secretary WATT. The whole area of Federal participation in water resources projects is undergoing reappraisal in this era of diminished Federal funds. There is no doubt in my mind of the need for Federal participation in the development of our water resources. This participation can be effected through the encouragement and acceptance of non-Federal partners in cost-share arrangements.

Chairman HATFIELD. What specific authority allows you to negotiate these new innovative financing arrangements, particularly when Congress has carefully considered and authorized these projects with different cost-sharing provisions?

Secretary WATT. It is not our intention to suggest the cost-share arrangements we anticipate presenting will affect previously funded water projects. It is our intention to formulate cost-share proposals that conform with existing law though there may be a need to petition for a restructuring of some parameters.

Chairman HATFIELD. What are the criteria being used to determine if a reclamation project meets the administration's requirements for a new construction start?

Secretary WATT. The criteria used to evaluate potential construction new starts are as follows: One, status of construction prerequisites; two, multipurpose benefits with emphasis on energy; three, local support; four, local cost sharing; five, benefit-cost ratio; and six, compliance with existing laws.

Chairman HATFIELD. What are those projects being considered as potential new construction starts and which ones are most likely to be proposed for construction?

Secretary WATT. The first category of projects being considered as potential construction new starts are those that have been authorized. They include the Animas-La Plata project, Colorado; Headgate Rock hydroelectric project, Arizona/California; Narrows unit, Colorado; Polecat Bench area, Shoshone extension unit, Wyoming; and Salmon Falls division, Upper Snake River project, Idaho. Other projects that may be considered if authorizing legislation is enacted soon are those projects included in S. 306, which all involve hydroelectric power development at existing Federal sites and the Buffalo Bill Dam modification project, Wyoming, included in S. 1409.

Chairman HATFIELD. Have any of the local sponsors for those projects under consideration agreed to the administration's criteria for local cost sharing and provided letters of intent to comply with the non-Federal financing requirements?

Secretary WATT. The administration's criteria for cost sharing and non-Federal financing have not yet been developed. The criteria is being considered by the Cabinet Council for Natural Resources and Environment and should be available in the near future. Accordingly, local sponsors have not had an opportunity to formally agree to the criteria.

Chairman HATFIELD. Please provide all pertinent correspondence concerning non-Federal cost sharing, letters of intent from local sponsors, and copies of any agreements on cost sharing on all of those projects under active consideration as a new construction start.

Secretary WATT. To date we have not received any letters of intent or agreements on cost sharing related to potential water project new starts. General correspondence considered pertinent to non-Federal financing and cost sharing has been received from the States of Colorado and Wyoming.

[The information follows:]

LETTER FROM GOV. ED HERSCHLER OF WYOMING

November 24, 1981

The Honorable James G. Watt
Secretary of the Interior
Office of the Secretary
Department of the Interior
Washington, D.C. 20240

Dear Secretary Watt:

An opportunity is developing in Wyoming which can provide us with a chance to demonstrate state-federal cooperation in funding and development of an existing federal water project.

Wyoming Senators Wallop and Simpson have supported the modifications to Buffalo Bill Dam and Reservoir and Senator Wallop has introduced legislation authorizing the construction, operation and maintenance of modifications of the existing Buffalo Bill Dam and Reservoir near Cody, Wyoming. S. 1409 proposes to raise Buffalo Bill Dam by twenty-five feet, enlarging the storage capacity of existing Buffalo Bill Reservoir by an additional 271,000 acre-feet, replace the existing power plant, and perform other modifications. The costs for these modifications are estimated at $83,000,000.

As Governor, I have long supported the modifications and enlargement of Buffalo Bill Dam and Reservoir along with new irrigation on Polecat Bench. These modifications have merit and meet one of my objectives of developing the waters in the State of Wyoming.

The State of Wyoming is interested in pursuing the modifications of Buffalo Bill Dam and Reservoir. The state may be in position to proceed with financing a substantial portion of the costs associated with enlarging Buffalo Bill. However, it is difficult for us to proceed until we know what level of federal assistance we could anticipate and what type of conditions the federal government might attach to the benefits of the enlargement. A decision by the state to participate in the enlargement of Buffalo Bill will greatly depend on the direction and commitment the federal government has for water projects. I would see Buffalo Bill as a vehicle to demonstrate a federal-state partnership in water projects.

However, before the state is able to make our offer to you, there are several fundamental policy and legal questions which I will need answers to, namely:

1. how would power revenues be split or shared;
2. how would the dam and reservoir be operated and costs for operation and maintenance be shared;
3. would state participation require another environmental impact statement;

4. how would water be marketed;
5. would state participation be tied to any acreage limitations, minimum flows, etc.

These are just a few of the questions I have regarding state participation in the modifications to Buffalo Bill. There are more questions which can be discussed at a later date.

However, it is important that I have an understanding of the administration's support (or lack of) for Buffalo Bill Dam and Reservoir in order to ascertain the nature and scope of the state's participation.

Again, let me reiterate and confirm the State of Wyoming's desire to puruse the enlargement of Buffalo Bill. In any event, since it is an existing federal water project, we need to know what conditions or constraints the state might expect. Upon receipt of your response, I am prepared to name a state negotiating team to confer with whomever you wish to appoint.

Sincerely yours,

LETTER FROM SECRETARY OF THE INTERIOR JAMES G. WATT,

FEB 1 1982

Honorable Ed Herschler
Governor of Wyoming
Cheyenne, Wyoming 82002

Dear Governor Herschler:

This is in further response to your letter of November 24, 1981, concerning the proposed modification of Buffalo Bill Dam and Reservoir in Wyoming.

Your letter asked for a Departmental response to five policy or legal questions. The following is a restatement of the question and our thinking on those issues at this time.

1. How would power revenues be split or shared?

Prior to the retirement of the Shoshone Powerplant in March 1980, the combined power output of the Heart Mountain and Shoshone Powerplants was approximately 84,500 megawatt hours (MWh) annually. When the proposed new Shoshone Powerplant is placed in service with the dam modified as planned, we expect a combined project generation of 116,400 MWh. We plan to fulfill our obligation to serve preference customers the historic generation. We would, also, be glad to discuss an equitable sharing of the cost and revenues created by the 31,900 MWh increased generation capability of the modified project.

2. How would the dam and reservoir be operated and costs for operation and maintenance be shared?

Under a cost and revenue sharing situation, operation of the dam and reservoir would be a joint responsibility of the existing water users, the State Engineer, and the Bureau of Reclamation.

Operation and maintenance costs would be shared in proportion to the cost allocation. If the State contracted for the entire yield of the modified dam, it would be responsible for the operation and maintenance (O&M) assigned to the increased conservation pool utilization. O&M on the powerplant would be shared in relation to cost and revenue sharing of the power function.

3. Would State participation require another environmental impact statement?

The construction of the modification of Buffalo Bill Dam, as now planned, would not require a new environmental impact statement (EIS). However, the marketing of water will require an EIS as use of the water was not defined and evaluated relative to impact or location in the present EIS.

4. How would water be marketed?

If the State of Wyoming contracts for the entire water yield of the dam modification, it would be responsible for marketing the water.

5. Would State participation be tied to any acreage limitation, minimum flows, etc.?

Yes, the State would be tied to the acreage limitation if the modification were a joint effort between the Bureau of Reclamation and the State. Also, the report makes a commitment to minimum flows if those flows are nondamaging to project purposes. The State would be bound by the same type of commitment.

The Bureau of Reclamation's feasibility report on modification of Buffalo Bill Dam has undergone the 90-day review by the Missouri River Basin States and interested Federal agencies as required by the Flood Control Act of 1944. The final environmental statement (FES 81-49) was filed with the Environmental Protection Agency (EPA) on November 9, 1981. Since the required 30-day waiting period from the date the FES was filed with EPA has expired, Reclamation is in a position to submit the feasibility report for our approval and subsequent submittal to the Office of Management and Budget for advice as to the relationship of the project to the President's program.

The Bureau of Reclamation will contact your office to pursue this matter further.

Sincerely,

Jim

SECRETARY

LETTER FROM GOV. RICHARD D. LAMM OF COLORADO

February 19, 1982

The Honorable James G. Watt
Secretary of the Interior
United States Department of the Interior
18th and "C" Streets, N.W.
Washington, D. C. 20240

Dear Mr. Secretary:

It is my pleasure to transmit herewith Senate Joint Resolution 6, which was recently enacted by the Colorado General Assembly and signed by me. This resolution authorizes the newly created Colorado Water Resources and Power Development Authority "to proceed to consider" the Narrows and Animas-La Plata federal reclamation projects.

The passage of this resolution comes in response to a recommendation, initiated by the Colorado Water Conservation Board, that the General Assembly make funds available for front-end cost-sharing on the two named projects. When I conferred with the legislative leadership about the Board's recommendation, it was decided to authorize the Authority, which had previously received $30 million from the Legislature, to consider financial participation in these projects. Thus, the Authority, as a political subdivision of the state but not an agency of the executive branch, is authorized to proceed with respect to cost-sharing on these projects.

The State's Department of Natural Resources and Water Conservation Board will cooperate with the Authority in this regard. All three entities are, therefore, most anxious to confer with you or your designated representative about cost-sharing on these projects.

Best wishes.

Sincerely,

Richard D. Lamm
Governor

SENATE JOINT RESOLUTION NO. 6.

BY SENATORS Anderson, Noble, Yost, Allshouse, Beno, Bishop, Clark, Dodge, Kadlecek, MacManus, Meiklejohn, Phelps, P. Powers, D. Sandoval, P. Sandoval, Schaefer, Soash, Stockton, and Susemihl;
also REPRESENTATIVES Younglund, Lillpop, Paulson, Spano, Armstrong, Chaplin, Chavez, Davoren, DeNier, Hamlin, Hastings, Herzog, Larson, Lucero, Mielke, Minahan, Pena, Reeves, Robb, Shoemaker, Spelts, and Taylor.

AUTHORIZING THE COLORADO WATER RESOURCES AND POWER DEVELOPMENT AUTHORITY TO PROCEED WITH THE CONSIDERATION OF THE NARROWS AND ANIMAS-LA PLATA FEDERAL PROJECTS.

WHEREAS, The Congress of the United States has authorized the construction of the Narrows and Animas-La Plata projects; and

WHEREAS, The Bureau of Reclamation of the United States Department of the Interior has completed studies for both projects and has published the same in the form of House Documents (United States Congress), definite plan reports, environmental impact statements, and various supplementary materials; and

WHEREAS, Said documents, reports, statements, and materials include analyses of the engineering, economic, and regulatory feasibility of both projects; and

WHEREAS, The Colorado Water Conservation Board has, pursuant to section 37-95-107, Colorado Revised Statutes 1973, reviewed said documents, reports, statements, and materials and has forwarded the same for both projects to the General Assembly, together with its recommendations thereon; and

WHEREAS, The construction of either project will preserve, protect, conserve, and develop the water resources of the state; promote the beneficial use of the waters of the state for the protection and preservation of the public health, safety, and welfare; create and preserve jobs and employment opportunities; and improve the economic welfare of the people of the state; and

WHEREAS, The General Assembly deems either project to be in the interests and to the advantage of the people of the state; and

WHEREAS, It appears that nonfederal sources of front-end cost-sharing will be required before the President and the Congress of the United States will act favorably on appropriations for the two said projects; and

WHEREAS, The General Assembly recognizes that the Colorado Water Resources and Power Development Authority is the public entity charged with the responsibility to develop the water resources in the state of Colorado; now, therefore,

Be It Resolved by the Senate of the Fifty-third General Assembly of the State of Colorado, the House of Representatives concurring herein:

That the Colorado Water Resources and Power Development Authority be and is hereby authorized, pursuant to section 37-95-107, Colorado Revised Statutes 1973, to proceed with the consideration of the Narrows and Animas-La Plata projects.

C B Bledsoe

Fred E. Anderson
PRESIDENT OF
THE SENATE

Carl B. Bledsoe
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Marjorie L. Rutenbeck

Lorraine F. Lombardi

Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE

Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

Pursuant to 37-95-107(5), C.R.S. 1973, this resolution is presented to the Governor for signature.

APPROVED Feb 3, 1982 2:16 pm

Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

PROGRAM EXECUTION

Chairman HATFIELD. What was the unobligated balance carried over from 1981 into fiscal year 1982 from Bureau of Reclamation programs, particularly the construction activities?

Mr. BROADBENT. The unobligated balance carried into fiscal year 1982 from Reclamation programs was approximately $102 million. Of this amount, about $82 million was in the construction program. However, $42 million of carryover for construction was from funds appropriated for the Teton Dam claims and is not available for other activities.

1983 BUDGET INCREASE

Chairman HATFIELD. What is the reason for such a large—23 percent—increase over last year's appropriation for the Bureau of Reclamation?

Mr. BROADBENT. The fiscal year 1983 budget increase over the fiscal year 1982 program is basically found in the construction, operation and maintenance, general administrative expense, and the general investigation activities.

The largest portion of the budget increase, $118.1 million, is due to the construction program and this increase is needed to continue ongoing work that was initiated prior to fiscal year 1983. The 1983 funding request will continue work on 2 preconstruction planning projects and 70 ongoing projects which include 4 new rehabilitation and betterment projects. The operation and maintenance increase of $22 million will enable the Bureau to perform essential maintenance work and replace wornout plant facilities and equipment that was deferred in fiscal years 1981 and 1982. The increase of $9 million in the general administrative expense program is a result of the initial acquisition of a three-stage replacement of the Bureau's central computer system. The general investigation program increase of $6 million includes $2 million for advance planning new starts and $4 million for new investigation studies.

Chairman HATFIELD. Could you provide for the record a list, by project or feature, where there is an increase over 1982 or new appropriation request, including the amounts involved and a brief, but specific, description of how the funds will be used?

Mr. BROADBENT. Yes; we can do that.

[The information follows:]

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
General Investigations		
Advance Planning	2,000	On projects that appear viable for implementation, advance planning studies will be initiated toward completing a definite plan report. This work will include detailed designs and estimates.
Construction Program		
Brantley Project	3,000	Relocation of Atchison Topeka and Santa Fe Railroad will be initiated. Acquisition of land and rights and final design of Brantley Dam will be continued.
Chief Joseph, Oroville-Tonasket Unit	5,400	Construction work will be initiated on the Ellisford, Tonasket, and Bonaparte Creek Pump Distribution Systems. Preconstruction work will continue on Osoyoos Pump Distribution System. Cordell and Crater Lakes Pumping Plants will be completed.
Columbia Basin, Irrigation Facilities	1,329	Construction of Block 26 lateral will be initiated.
Columbia Basin, Third Powerplant	4,310	Work on the downstream riverbank stabilization will continue.
Central Valley Project, Auburn-Folsom South Unit	733	Construction will be completed on recreational facilities for Sugar Pine Reservoir.
Central Valley Project, Miscellaneous Project Programs	2,142	Rehabilitation work will be continued on Delta-Mendota Canal.
McGee Creek Project	23,967	A contract will be awarded for the construction of McGee Creek Pumping Plant and Aqueduct. Work will continue in clearing the reservoir and constructing the dam.
Pick-Sloan Missouri Basin Program, North Loup Division	11,547	Construction will continue on Calamus Dam and Reservoir and Mirdan Canal and laterals.

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
Pick-Sloan Missouri Basin Program, O'Neill Unit	200	Design of Norden Dam will be initiated.
Pick-Sloan Missouri Basin Program, Riverton Unit	130	Rehabilitation of existing structures and installation of lining and buried pipe will be continued on the Wyoming Canal and Pilot Canal Laterals.
San Luis Valley, Closed Basin Division	2,260	Work will continue on deep wells, canals, and laterals
Colorado River Basin Salinity Control, Title I Division	22,613	Construction will continue on the Yuma Desalting Plant and contracts will be awarded to furnish process pumps. Work will continue on the pretreatment II and membrane desalting equipment contracts.
Colorado River Basin Salinity Control, Grand Valley Unit	1,189	Work will continue on the Grand Valley Canal and Lateral Systems.
Colorado River Basin Salinity Control, Las Vegas Wash Unit	883	A ground-water verification program in the Pittman area will be started.
Colorado River Basin Salinity Control, Paradox Valley Unit	4,953	Data collection for Radium Dam and Dike and evaluation of deep well injection alternative will be continued.
Central Utah Project, Bonneville Unit	12,923	Construction will be completed on Vat Tunnel, Rhodes-Hades Tunnel Complex, and Strawberry Tunnel Intake Structure. Construction will continue on Stillwater Tunnel and Jordan Aqueduct System. A contract will be awarded for the Upper Stillwater Dam structure.
Dallas Creek Project	31,853	Construction will be continued on Ridgway Dam.
Dolores Project	2,128	Work will be continued on construction of McPhee Dam.

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
Rehabilitation and Betterment Program	17,457	Rehabilitation and betterment work will be initiated on the Helena Valley Unit, Strawberry Valley Project, Okanogan Irrigation District and the Granger Irrigation District. Rehabilitation work will be continued on the regulating dam and the pressure pipeline distribution system on the Yakima-Tieton Irrigation District.
Drainage and Minor Construction Program	5,474	On the Washoe Project, construction will be initiated on Stampede Powerplant and Switchyard and modification of Pyramid Lake Fish Ladder will be completed. A contract for remedial construction to alleviate seepage at Foss Dam will be awarded on the Washita Basin Project.
Safety of Dams Program	11,649	Preconstruction activities and construction work on the auxiliary spillways will continue on eleven safety of dams projects. Preparation of safety of dams modification reports will also continue.
Operation and Maintenance Program		
Boulder Canyon Project	2,432	Continue plant modernization and powerplant updating programs.
Parker-Davis	299	Powerplant equipment and replacement of vehicles and other equipment.
Yuma Area Project	2,519	Levee riprap protection on Colorado River levee below Lake Mead.
Solano Project	1,583	Complete administration warehouse complex at Lake Berryessa.
Central Valley Project	1,461	Replacement or repairs to powerplant equipment and generator rewinds.
Orland Project	15	Purchase of riprap for erosion control.

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
Collbran Project	120	Repairs to outlet works and embankment at Blackman Dam and equipment replacement.
Fryingpan-Arkansas Project	41	Inundation studies at Ruedi Reservoir.
San Luis Valley, Carlsbad and Washita Basin Projects	3	Materials, supplies, and recurring expenses.
Boise Area	402	Complete powerplant uprating and modernization at Black Canyon and Anderson Ranch Dam.
Minidoka Area	638	Facility improvements at Ririe Dam and funding Teton wildlife mitigation lands.
Hungry Horse Project	195	Transformers and equipment replacement.
Milk River Project	4	Materials, supplies, and recurring expenses.
Washoe Project	30	Emergency auxiliary generator at Stampede Dam.
Middle Rio Grande Project	1,467	Continue restoration of low flow conveyance channel near Rio Grande River.
Rio Grande Project	148	Powerplant modification and equipment replacement.
Rogue River Basin	17	Equipment replacement.
Tualatin Project	1	Operating expenses.
Umatilla Project	3	Repair bypass outlet works.
Provo River Project	3	Operating expenses.

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
Columbia Basin Project	1,293	Continue replacement of main unit transformers and station-service turbine runners.
Yakima Project	316	Equipment replacement, hydromet system, dam and canal repair, painting, and other repairs and equipment.
Acreage Limitation Program	20	Preparation of rules and regulations for administration of acreage limitation.
Cultural Resource Activities Program	515	Surveys and data collection to locate and evaluate cultural resources at Bureau projects.
Examination of Existing Structures Program	1,723	Preparation of inundation maps, strong motion earthquake instrumentation.
Land Resource Management Program	298	Land use inventories, implementation of land management plans at various Bureau projects; clearing trespassers, weed control, fencing, dust abatement, and vector control
Negotiation and Administration of Water Marketing Contracts	1	Additional contracts to be administered.
Soil and Moisture Conservation Program	1,595	Erosion control, revetment work, noxious weed control, and revegetation around canals and reservoirs.
Water Management and Conservation Program	92	Materials, supplies, and operational expenses.

Appropriation Project/Feature Exceeding FY 1982 Budget	FY 1983 Increase Over FY 1982 ($000)	Description FY 1983 Program
Pick-Sloan Missouri Basin Program		
Kansas River Area	543	Riprap and spillway repairs at Lovewell and Trenton Dams, repair of visitor center, inundation studies, and operating costs.
Missouri Souris Area	88	Replacement items and repairs at Jamestown and Heart Butte Dams and operating costs.
North Platte Area	3,006	Completion of Casper Power Control Center and deferred replacement items.
Upper Missouri Area	2,328	Emergency cable by-pass system at Yellowtail Dam and other replacement items.
General Administrative Expenses		
General Services Activities	4,872	For incremental costs resulting from merit pay increases, for increased costs other than salaries, and for purchase of equipment and contract work postponed during fiscal year 1982.
Non-Recurring Items	4,500	For acquisition of the first of 3-stage replacement of the Bureau's central computer system.

NEW CONTRACT AWARDS

Chairman **HATFIELD**. Could you also provide for the record the new contracts the Bureau plans to award in the last quarter of fiscal year 1982, including by project the estimated funding requirement, a brief description of work, the estimated award date, and other data similar to that provided in last year's hearing?

Mr. **BROADBENT**. I would be glad to provide that information.

Chairman **HATFIELD**. The committee would also like to have the same information for new contract awards scheduled for fiscal year 1983. Could you please provide that for the record as well?

Mr. **BROADBENT**. Yes; we can provide information on new contract awards for fiscal year 1983.

[The information follows:]

FISCAL YEAR 1982 NEW CONSTRUCTION CONTRACT AWARDS

4th Quarter Fiscal Year 1982

Project	Contract Description	Award Date	Amount ($000)
Pick-Sloan Missouri Basin Project, Garrison Diversion Unit	Construction of Pumping Plant, Oakes Test Area	7-82	$ 470
Yakima, Outlook Irrigation District	Rehabilitation of Irrigation District Facilities	7-82	20
Grand Valley, Orchard Mesa Division	Construction of Orchard Mesa Pumping Plant	7-82	55
San Angelo, Twin Buttes Dam	Pipe Collector Drain System	7-82	1,011
Newlands Project, Lahontan Dam	Rehabilitation of Lahontan Dam	9-82	344
Colorado River Salinity Control Project, Title I	Construction of Pretreatment Facility	9-82	329
Central Utah Project, Bonneville Unit	Processing of Aggregate Material - Upper Stillwater Dam	7-82	300
	Construction of the Jordan Aqueduct - Reach 4	9-82	649
Dallas Creek Project	Construct Ridgway Dam and Reservoir	7-82	2,200
Central Arizona Project	Completion of Granite Reef - Reach 6-12	8-82	50
	Construction of the Salt Gila Pumping Plant	7-82	600

FISCAL YEAR 1983 NEW CONSTRUCTION CONTRACT AWARDS

With Total Costs in Excess of $1,000,000

Project	Contract Description	Award Date	Amount ($000)
Brantley	Relocate Atchison, Topeka and SantaFe Railroad	9-83	$ 25
Chief Joseph, Oroville-Tonasket	Construct Ellisford Pumping Plant	10-82	995
	Construct Ellisford Distribution System	10-82	2,215
	Construct Tonasket Pumping Plant	10-82	765
	Construct Tonasket Distribution System	10-82	1,805
	Construct Bonaparte Creek Pumping Plant	10-82	670
	Construct Bonaparte Creek Distribution System	10-82	2,015
Columbia Basin, Irrigation Facilities	Construct Block 26 Laterals	10-82	5,500
Central Valley Project, Miscellaneous Project Programs	Rehabilitate Delta - Mendota Canal	10-82	1,500
Central Valley Project, Sacramento River Division	Construct Colusa County Water District Pumping Plant	3-83	1,715
	Construct Westside Water District - Glenn Valley	3-83	520
	Construct Colusa County Water District Reach 3A	6-83	1,225
	Construct Arbuckle Suboffice	6-83	1,000
Central Valley Project, San Felipe Division	Construct Pacheco Pumping Plant	11-82	3,017
	Construct Pacheco Conduit-Section 1	7-83	909
	Construct Santa Clara Conduit	11-82	14,500
Fryingpan-Arkansas Project	Modify Twin Lakes Dam	4-83	1,605
Grand Coulee Third Powerplant	Slope Stabilization, Area 3.4	1-83	1,500
	Dewatering Wells, Area 8.9	7-83	500
	Complete Work on All Areas	4-83	500

Project	Contract Description	Award Date	Amount ($000)
McGee Creek Project	Construct McGee Creek Pumping Plant	11-82	1,721
	Construct McGee Creek Aqueduct	11-82	13,074
	Construct Access Roads	9-83	100
P-SMBP, Garrison Diversion Unit	Construct Oakes Test Area-Drains	8-83	45
	Construct Reach 1B, New Rockford Canal	8-83	50
P-SMBP, North Loup Division	Calamus Dam Instrumentation	1-83	1,240
	Relocate Roads in Reservoir Area	10-82	3,000
	Construct Mirdan Canal 2-3, Laterals 1-2	6-83	1,000
San Luis Valley, Closed Basin	Construct Canals Stage 1-2, Reach A	9-83	220
	Construct Laterals Stage 1-2	9-83	132
Okanogan, Okanogan Irrigation District	Replace Lateral Distribution System	1-83	935
P-SMBP, Helena Valley Unit	Rehabilitate Helena Valley Facilities	10-82	352
Yakima, Granger Irrigation District	Replace Lateral Distribution System	11-82	122
Yakima, Sunnyside	Rehabilitate Joint Facilities	2-83	100
Klamath Project	Construct Distribution and Drain Systems	4-83	1,173
Washita, Foss Dam	Foundation Cutoff Foss Dam	11-82	2,500
Washoe Project	Construct Stampede Powerplant	5-83	2,314
Hyrum Project, Hyrum Dam	Hyrum Dam and Spillway Modification	4-83	3,275
Orland, Stony Gorge Dam	Rehabilitation of Stony Corge Dam	9-83	100
Sun River, Willow Creek Dam	Modification and Instrumentation	5-83	1,000
Colorado River Basin Salinity Control Project, Title I Division	Completion of Yuma Desalting Plant	3-83	8,031
	Furnish Process Pumps	10-82	2,954
	Development of Mittry Lake	10-82	450

Project	Contract Description	Award Date	Amount ($000)
Colorado River Basin Salinity Control Project, Paradox Valley Unit	Deep Well Injection	7-83	4,501
Central Utah Project, Bonneville Unit	Construct Upper Stillwater Dam	4-83	15,117
	Construct Taylor Canal Area Drains	10-82	584
	Construct Access Road to Exploration Tunnel	10-82	3,000
	Trailerhouse Replacement at Duchesne	11-82	2,000
Central Utah Project, Jensen Unit	Construct Tyzack Aqueduct Reach 2	3-83	1,994
Dolores Project	Williams Draw-Ormiston Point Road Construction	4-83	1,294
	Dolores-Norwood-May Canyon Road Construction	6-83	1,704
	Lone Dome Road Construction	4-83	1,386
	Construct Dolores Landfill and Protective Dike	3-83	900
	Construct Great Cut Pumping Plant	5-83	2,200
	Construct Dove Creek Canal-Reach I	7-83	2,149
Colorado River Storage Project, Modification/Addition to Completed Facilities	Major Grouting of Navajo Dam	5-83	2,061
Central Arizona Project	Electro-Mechanical Equipment Granite Reef-Reach 1 to 5B	3-83	1,000
	Install Power Control Cable-Reach 1 to 5B	7-83	50
	Install Salt River Siphon Scour Controls	4-83	1,500
	Construct Salt Gila Canal-Reach 1B	5-83	3,000
	Construct Salt Gila Canal-Reach 2	10-82	12,000
	Construct Salt Gila Canal-Reach 4	1-83	12,217
	Construct Salt Gila Canal-Check Structure	9-83	5
	Tucson Aqueduct Pumping Plant No. 2-Prime Contract	9-83	157
	Tucson Aqueduct Pumping Plant No. 2-Pumps, Motors, Valves	9-83	24
	Construct Spook Hill Transmission Line	11-82	1,500
	Construct McCullough-Davis Transmission Line	11-82	6,000

WATER RESOURCE DEVELOPMENT COSTS AND BENEFITS

Chairman **HATFIELD**. Please provide for the record a tabulation by major function—hydro, flood control, irrigation, recreation, water supply, et cetera—the cumulative investment to date, the replacement cost, and the benefits realized by the Federal Government in the way of, say, flood damages prevented, tons of commerce carried, and revenues generated by navigation facilities; and power produced at Federal hydro projects and the value of that power compared to alternate sources.

Mr. **BROADBENT**. We would be happy to provide this information for the record.

[The information follows:]

FEDERAL RECLAMATION INVESTMENT

After 78 years of Bureau of Reclamation investments, total funds appropriated for construction activities totaled $10.8 billion as of September 30, 1980. These funds were distributed as follows by major functions:

[In billions of dollars]

Irrigation	$5.0
Commercial power	2.8
Municipal and industrial water	1.1
Flood control	.6
Recreation	.1
Fish and wildlife	.4
Other	.8
Total	10.8

When indexing these costs to reflect 1980 dollars, the replacement value of the original cumulative investment would total approximately $45 billion.

Benefits derived from the various Reclamation program functions include:

Irrigation.—The gross crop value of all crops produced in 1980 totaled $7.4 billion. Food, fiber, and forage production totaled 54.4 million tons. This would meet the annual food requirements for 39 million people. The cumulative value of crop production from all Reclamation projects was approximately $78 billion as of 1980.

Power.—Electricity generated by Reclamation's 50 hydroelectric plants amounted to 46 billion kilowatt-hours in 1980. Since 1973, total power generated has totaled 323.5 billion kilowatt-hours, which would be equivalent to 579 million barrels of oil used. Electric power revenues from the energy produced at these plants amounted to approximately $354 million in 1980.

Municipal and industrial.—Approximately 664 billion gallons of water were delivered from Reclamation facilities for municipal and industrial use in 1980. During the past 16 years, population served has increased over 53 percent to 19 million persons in 1980.

Flood control.—Operation of Reclamation project facilities prevented an estimated $177.7 million in flood damages during 1980. Cumulative flood control benefits since 1950 have amounted to nearly $2.1 billion.

Recreation.—Use of Reclamation's 286 recreational facilities totaled 55 million visitor days in 1980. Sightseeing, water skiing, camping, and boating were the major recreational activities. Since 1958, these activities have accounted for 203 million visitor-days.

General.—Nearly $18.9 billion in increased business activity results annually from all functions of the Bureau of Reclamation. This is estimated to have generated sufficient income and corporate profits to add nearly $1.4 billion annually in tax revenues to State and local governments. The total tax revenues accruing to the Federal Government since 1940 from this economic activity are estimated at about $31.5 billion. This increased economic activity has provided over 800,000 work-years of employment annually.

FUNDING REQUESTS CONTINGENT UPON AUTHORIZATION

Chairman **HATFIELD**. Provide for the record a list of all of those activities contained in your 1983 budget that require enactment of authorization legislation to fully utilize the funds requested.

Mr. **BROADBENT**. The only item in our fiscal year 1983 request which requires authorizing legislation is the Prairie Bend unit of the Pick-Sloan Missouri basin program. Feasibility authorization legislation is pending before Congress in S. 2091 and H.R. 5536.

FISCAL YEAR 1983 CAPABILITIES

Chairman **HATFIELD**. The committee would like you to provide for the record a list showing the Bureau's fiscal year 1983 capability for all studies, planning, and construction projects. The list should include the estimated Federal cost, allocations to date, the 1983 budget request, if any, and the 1983 capability.

Mr. **BROADBENT**. We would be happy to provide that information for the record.

[The information follows:]

Fiscal Year 1983 Capability by Appropriation and Project

NOTE: ADDITIONAL CAPABILITY IS ONLY AVAILABLE BY ADJUSTMENTS WITHIN THE BUREAU'S BUDGET REQUEST

(In thousands of dollars)

Appropriation/Project	Total Estimated Federal Cost	Allocations to Date	FY 1983 Program	Additional Capability	Total Capability
General Investigations					
Plan Formulation Investigations					
Feasibility Investigations:					
CENDAK, South Dakota	3,250 1/	200	100	400	500
Dominguez Reservoir Project, Colorado	1,748	948	--	400	400
Santa Margarita Project, California	560	260	122	80	202
Wind-Hydroelectric Energy Project, Wyoming	19,018	15,259	1,943	813 2/	2,756
Other General Investigations Programs	453,295	209,839	34,497	-1,693	32,804
Undistributed reduction based on anticipated delays			-177		-177
Total Program - General Investigations	477,871	266,506	36,485	--	36,485
Construction Program					
Regular Construction					
Gila Project, Yuma Mesa Division, Arizona and Yuma Auxiliary Project, Arizona	475	--	--	475	475
Harlingen Irrigation District, Texas	7,772	4,572	--	400	400
Newlands Project, Nevada	700	--	--	600	600
North Platte Project, Guernsey Dam, Wyoming	2,240	--	--	2,240	2,240
Pick-Sloan Missouri Basin Program: Garrison Diversion Unit, North Dakota	1,097,592	159,961	4,000	10,000	14,000
Other Construction Program Projects	19,420,156	7,811,082	734,328	-13,715	720,613
Undistributed reduction based on anticipated delays			-71,743	--	-71,743
Total Program - Construction Program	20,528,935	7,975,615	666,585	--	666,585
Loan Program					
Ak-Chin Indian Community (East), Arizona	12,272	--	--	2,100	2,100
DeLuz Heights Municipal Water District (cost escalation loan), California	8,388	5,403	--	2,985	2,985
Rainbow Municipal Water District (cost escalation loan), California	18,588	9,899	--	5,816	5,816
Other Loan Programs	138,694,911	83,967,630	41,783	-10,901	30,882
Undistributed reduction based on anticipated delays			-2,183	--	-2,183
Total Program - Loan Program	138,734,159	83,982,932	39,600	--	39,600
Other Appropriations	NA	NA	193,850	--	193,850
Total - All Appropriations	NA	NA	936,520	--	936,520

1/ Assumes authorization of Feasibility study.

2/ Reprogramming of $440,000 in FY 1982 could reduce this amount to $373,000.

STUDIES AND PROJECTS NOT CONTINUED

Chairman **HATFIELD**. Also provide for the record a list of all those studies, projects, programs, and activities funded in the current year for which no funds are requested for fiscal year 1983, and the reason why no funds are requested.

Mr. **BROADBENT**. Yes; we will provide that information for the record.

[The information follows:]

ONGOING PROGRAMS WITH NO FY 1983 BUDGET REQUEST

Appropriation Projects/Programs	Reason for No FY 1983 Budget
General Investigation	
Plan Formulation	
Appraisal Investigations	
Grand Ronde River Basin, Oregon	Studies completed
Lower Deschutes River Basin, Oregon	Studies completed
Palo Verde Hydropower Project, California	Project not currently needed
Lower Brule Indian Reservation Area, South Dakota	Studies completed
Feasibility Investigations	
CRSP, Glen Canyon Dam, Arizona	Concluded due to lack of viability
CRSP, Utah Lake Unit, Utah	Concluded due to lack of viability
Dominguez Reservoir Project, Colorado	Studies completed
Texas Basins, Big Cow Creek Project, Texas	Studies completed
Fort Benton Reformulation, Montana	Concluded due to lack of State and local support
Lower James - Ft. Randall Water Diversion Proposal, South Dakota	Concluded due to lack of viability

Appropriation Projects/Programs	Reason for No FY 1983 Budget
Special Investigations	
Hermiston Water Conservation, Oregon	Studies completed
Upper Snake River Water Management Study, Idaho, Wyoming	Studies completed
Yakima Valley Water Management Study, Washington	Studies completed
Kamath Project, Main Division, A-Canal Cross Drainage Study, California-Oregon	Studies completed
Llano Estacado Playa Lake Resources Study, New Mex., Texas, Colorado Kansas, Oklahoma	Studies completed
Northern Great Plains Wind Energy Study, Montana, Wyoming, N. and S. Dakota	Investigation rescoped to complete in FY 1982
Farwell Unit Water Conservation Study, Nebraska	Studies completed
Upper Platte River Study, Nebraska Wyoming, Colorado	Studies completed
Low Head Hydroelectric Evaluation and Inventory, Various	Studies completed
General Engineering and Research **Atmospheric Water Resources Management Program**	
High Plains Cooperative Program	Experiment suspended
Southwest Drought Rain Augmentation Research	Studies completed

Appropriation Projects/Programs	Reason for No FY 1983 Budget
Advanced Scientific and technological Applications	Incorporated into the Water Resources Planning and Engineering Research Program
Construction Program	
Mann Creek Project	Completion of drainage and minor construction work
Sun River Project, Gibson Dam	Completion of safety of dams work
Pick-Sloan Missouri Basin Program, Lower Marias Unit	Project completion
Pick-Sloan Missouri Basin Program, Dickinson Unit	Completion of drainage and minor construction work
Shoshone Project, Garland Division	Completion of rehabilitation and betterment work
Animas-La Plata Project	Completion of preconstruction activities

PROJECTS IN LITIGATION

Chairman HATFIELD. Please provide for the record a list of those projects included in the 1983 budget request that are currently being delayed because of litigation, including a brief report on the nature and schedule for resolving the legal issues in dispute.

Mr. BROADBENT. We will be happy to provide this information for the record.

[The information follows:]

LITIGATION CAUSING PROJECT DELAYS

Three construction projects and one operation and maintenance program included in the 1983 budget request are currently being delayed by litigation.

The O'Neill unit, Nebraska, is under an injunction pending court approval of a second supplement to the project final environmental statement. The supplement was completed July 24, 1981, but the court has not yet ruled on its adequacy. We expect a favorable ruling soon and will then proceed with the budgeted program.

The Bureau is under two separate court orders to prepare regulations to administer the acreage limitation provisions of reclamation law and to prepare an environmental impact statement on the rulemaking. The draft environmental statement and proposed rules were published in January 1981, but the comment period has been extended and public hearings postponed in anticipation of legislative activity by the Congress this year. Following enactment of legislation or when it becomes clear legislation will not be approved this year, the rulemaking will be reinitiated.

On the Auburn-Folsom South unit, California, the judge retained jurisdiction over the case pending completion of the final environmental statement on the lower American River alternative studies scheduled for February 1984.

On New Melones Reservoir in California, the circuit court of appeals judge reinstated a restriction this February on filling the reservoir, limiting the reservoir elevation to 844 feet above sea level. Due to spring snow melt, the reservoir is above that level and releases are being made under a court-ordered schedule to lower the water to that level. If the injunction is made permanent, a decision will have to be made whether to appeal to the Supreme Court.

KLAMATH "A" CANAL, OREGON

Chairman HATFIELD. The threat of flood damage resulting from increased urban runoff into the Klamath "A" Canal prompted us to provide funding in fiscal year 1980 for study into this problem. In response to my question 2 years ago, you indicated that a report was scheduled for completion in September 1980. Last year, the scheduled completion date was fiscal year 1981, due to the need for additional evaluations of alternative plans. In the fiscal year 1983 justification materials, you state that, "Due to delays in execution of the contract for work in connection with the study, the study has been rescheduled for completion in fiscal year 1982." Specifically, why was there an additional delay in execution of the contract?

Mr. BROADBENT. The schedule was extended 6 months due to unexpected review requirements associated with the negotiation of two architect-engineer contracts to perform work on the study.

Chairman HATFIELD. Describe in detail what has been accomplished on the study to date.

Mr. BROADBENT. The study was just recently completed and is now ready to be reviewed in our Washington, D.C., office and the Engineering and Research Center in Denver before releasing the results to the Congress and the public. The preliminary results show that the best method for solving the flooding problem would be to raise the canal embankment sufficiently to contain a 100-year flood. The results of the study will be used as a basis for negotiating with the city of Klamath Falls for sharing the cost of the necessary work.

Chairman HATFIELD. When in fiscal year 1982 do you expect completion of the study?

Mr. BROADBENT. The study should be released to the Congress and the public in June 1982.

Chairman HATFIELD. Is additional funding necessary to complete the study?

Mr. BROADBENT. No additional funding is necessary to complete the study.

TUALATIN PROJECT, OREGON

Chairman HATFIELD. The last 2 years, you requested and were provided funding to continue work to prevent erosion of the perimeter road around Henry Hagg Lake. The price tag to complete this work has increased a number of times, and this year the request is for another $555,000. What is the status of your ongoing work and why is this funding needed? I understand that there have been additional recent problems with erosion and earth slides which damaged the road. What is the nature and extent of the erosion and damage to the road?

Mr. BROADBENT. Several years ago, six areas were identified as actual or potential slide areas on the perimeter road constructed by the Bureau around Henry Hagg Lake. Repairs were subsequently made at all six locations. However, heavy rains have occurred and additional slides have taken place at two locations, which are designated slide 1 and slide 4. The funds requested are required for repairs at these two locations. At the slide 1 area, the road foundations became saturated over the winter of 1981–82, and minor vertical and lateral displacement of roadway surfaces resulted. The same rains caused extensive displacement at the slide 4 location causing the road to close and traffic to detour.

Chairman HATFIELD. Do you plan to make temporary repairs so traffic continues to move freely, and how soon can this take place?

Mr. BROADBENT. As stated, slide 1 was only minor and traffic was only required to slow down. At slide 4, it is expected to take about 1 month to complete the detour and restore traffic flow.

Chairman HATFIELD. What did the additional geological investigations performed in fiscal year 1980 indicate about the stability of the area and the placement of the road?

Mr. BROADBENT. The geologic investigations performed during fiscal year 1980 indicated there were areas of potential subsidence in the roadway alinement, but this condition was known to be general for the area when the road was constructed. The 1980 investigations were site-specific and dealt with suspected problem areas.

Chairman HATFIELD. In your professional judgment, can we expect these problems to continue, and is relocation of the road feasible and desirable?

Mr. BROADBENT. It is our expectation that when repairs are completed at these two slide areas, problems at these six areas will be rectified. However, due to the nature of the terrain and the heavy rainfall in this part of the country, additional problems may develop. Again, this situation is normal and expected by those constructing roads there. Relocation of the roads would not be desirable or feasible, since much of this portion of Oregon has ancient landslide areas and would be almost impossible to locate a road that would not encounter some of these.

Chairman HATFIELD. In your view, who is responsible for the present location of the road; and, if relocation is necessary or desirable, how should the project be funded?

Mr. BROADBENT. The Bureau, after consultation with Washington County officials, selected the location of the road when it was relocated from the reservoir site in 1974. We do not believe the road should be further relocated since it is not possible to avoid the same geologic conditions in the area.

OPERATION OF RECREATION AREAS

Chairman HATFIELD. I understand there are problems with the operation of the recreation facilities on this project. Can you give me a status report?

Mr. BROADBENT. The problem is one of financing the operation of the Tualatin project recreation program. Under a 1973 contract with Washington County, Oreg., the county agreed to repay a portion of the capital costs of the recreation facilities being constructed adjacent to Henry Hagg Lake, the reservoir behind Scoggins Dam. In addition, the county was to assume operation, maintenance, and replacement responsibilities upon completion of construction. Construction was completed and the facilities were transferred to the county on January 1, 1979.

Subsequent to the execution of the above-mentioned contract, the county had a change in financial priorities and does not now wish to commit tax revenues to the Tualatin recreation program. On November 2, 1979, Representative AuCoin introduced a bill, H.R. 5792, to give the county legislative relief from the contract. No action was taken on that bill and it has not been reintroduced.

In the interim, and as a stop-gap measure, we are operating the facilities at county expense. Although county officials may again seek legislative relief, we are working with them and attempting to have them resume management of the facilities.

The 1973 contract also commits the county to participate in the construction and operation of phase II recreation facilities. Due to the heavy recreation load at this dam and reservoir, the phase I facilities are being overloaded and phase II facilities are needed. However, phase II work cannot begin without the county's financial commitment or relief granted through legislation.

Chairman HATFIELD. Please bring us up to date on the report on phase II and any further plans for phase II?

Mr. BROADBENT. We are in the process of completing the regional director's feasibility report and draft environmental impact statement and hope to finish this work within the next 6 months. The viability of the project will depend on (1) a determination of State support for the project and a willingness to cost share, (2) the ability to develop an acceptable relocation plan for those families living within the proposed reservoir area, and (3) a confirmation of the needs for municipal and industrial water.

The 1978 construction was completed on major facilities of the Tualatin first phase project including Scoggins Dam. Since that project can satisfy only part of this rapidly growing area's water needs, a second phase has been planned. Second phase would be keyed to construction of a storage facility at one of two sites on the Tualatin River above the town of Gaston to serve water quality, municipal and industrial water, irrigation, fish and wildlife, recreation, and flood control needs.

SILETZ RIVER BASIN STUDY

Chairman HATFIELD. What is the status of the Siletz River basin project in Oregon? What is the Bureau's 1983 capability if further work is authorized?

Mr. BROADBENT. The appraisal report on the Siletz River basin project was completed in May 1981. The report confirmed the potential for a multipurpose water storage project with emphasis on providing municipal and industrial water supplies and anadromous fishery enhancement. In that report we recommended that a feasibility study be accomplished if desired by prospective water users. In view of the appraisal study findings and the recent public interest in municipal and industrial water supplies and other project services, we believe that a feasibility study is warranted.

We have prepared a preliminary plan of study for a feasibility investigation. The major work items include detailed geological investigations at the potential storage site on Big Rock Creek, design of the dam structure, indepth hydrologic studies, and the necessary economic and environmental evaluations. First year funding requirements would be $100,000 and we estimate that the study would require 3½ years to complete at a total cost of $695,000. However, feasibility study authority from the Congress would be required before we could request an appropriation of funds.

The earliest we could begin the feasibility study if the work is authorized in this session of the Congress would be fiscal year 1984.

SAN FELIPE DIVISION

Chairman HATFIELD. What is the current status of the definite plan report and revised cost allocation and repayment analysis?

Mr. BROADBENT. In view of the fact that construction of the San Felipe division is about one-third complete, a definite plan report is not now needed. Therefore, we are proceeding as follows: One, we have prepared a status report on the San Felipe division which includes a compilation of information prepared for the definite plan report; and two, we will prepare a cost allocation and repayment analysis report after construction has been completed.

WATSONVILLE SERVICE AREA

Chairman HATFIELD. A portion of the total estimated project cost to serve the Watsonville area is being deferred. However, sufficient capacity is being included in Pacheco project facilities to serve the Watsonville area if interest develops. Will additional benefits be realized by those areas being served by the additional capacity and, if so, why isn't a portion of that cost being recovered in current repayment contracts?

Mr. BROADBENT. Capacity to serve the Watsonville subarea has been included in the Pacheco tunnel, Pacheco conduit, and Pacheco pumping plant. However, this additional capacity is not needed to accommodate the needs of existing contractors. Therefore, a portion of the tunnel, conduit, and pumping plant costs has been deferred for repayment until some future demand develops.

SOLAR, WIND, AND OTHER RENEWABLE ENERGY WORK

Chairman HATFIELD. Provide for the record a list of any new or on-going activities related to solar, wind, or other renewable energy source, either connected or separate from the hydro system. Include a brief description of the work, the current status, total estimated cost allocations to date, planned allocation for 1982, budget request for 1983, and the balance to complete.

Mr. BROADBENT. We will provide a list of the on-going or new solar and wind energy projects.

[The information follows:]

ON-GOING OR NEW SOLAR AND WIND ENERGY PROJECTS

1. Central California-Nevada Wind Energy Study (California, Nevada)
2. Northern Great Plains Wind Energy Study (Montana, Wyoming, North Dakota, South Dakota)
3. Wind-Hydroelectric Energy Project (Colorado, Wyoming, Utah)
4. Solar/Hydro Integration Project (Arizona, Nevada)

The Central California-Nevada Wind Energy Study has involved the collection of detailed wind data at 12 locations near Willows, Williams, Sacramento, Modesto, Fresno, and Bakersfield in California and near Austin, Nevada, and will determine the potential for generating electricity utilizing the wind energy at certain selected sites in California and Nevada. The energy generated could be integrated with existing or new Reclamation hydroelectric facilities in both California and Nevada, including the pump-back storage facilities of San Luis Reservoir. During fiscal years 1980 and 1981 twelve automatic weather stations, which gather and transmit data through a Geosynchronous Operational Environmental Satellite, were installed at California and Nevada sites. The study is scheduled to be terminated in fiscal year 1983. A report will be prepared with an analysis of data collected.

The Northern Great Plains Wind Energy Study has involved the collection of detailed wind data at 15 locations near Cut Bank, Great Falls, Lewiston, and Livingston in Montana; near Minot, Carrington, Dickinson, and Hettinger in North Dakota; near Leola, Hayes, Oelrichs, and Bonesteel in South Dakota; and near Cody, Powder River area, and Lander in Wyoming. These sites have good potential for wind-generated electrical systems. Consideration of the wind data, along with the location of hydroelectric facilities and power transmission lines, will result in identification of the best sites for the integration of wind-generated electricity with hydropower facilities. The flexibility of these plants for meeting peaking power needs can be expanded when integrated with hydroelectric plants. The study is scheduled to be terminated at the end of fiscal year 1982. A report will be prepared with a tabulation of the data collected.

The Wind-Hydroelectric Energy Project was authorized by Public Law 96-375, October 3, 1980. It includes an investigation of the feasibility of a large-scale development of wind turbine generators (WIG) from 1.0 to 5.0 megawatts installed capacity with a total wind energy field of about 100 megawatts in an 800-square-mile area in Carbon and Albany Counties near Medicine Bow, Wyoming. The investigation (including the installation of two system verification units) will evaluate the integration of windpower with Colorado River Storage Project hydrocapacity to produce marketable peaking energy to conserve oil and relieve critical power shortages. The Regional Director's Report, Environmental Assessment, and the Finding of No Significant Impact presenting the results and recommendations for project authorization was completed in June 1981.

The system verification installation includes design, construction, and test operation of a 4-megawatt wind-turbine unit under construction by Hamilton Standard with an interconnected hydroelectric system, and appurtenant monitoring and test equipment. Work on this unit is scheduled for completion in fiscal year 1983. Installation of a second system verification unit (Boeing MOD-2 rated at 2.5 megawatts) was initiated in 1981; however, funding is not available in fiscal year 1982 to complete the second unit. An extensive environmental monitoring program has been started to evaluate baseline conditions, construction, and the operational impacts of a field of wind turbines.

The Solar/Hydro Intergration Program is planned to be located on Federal land in the regulatory and protective pumping-well field 5-mile zone south of Yuma, Arizona, or on the Mormon Mesa near Overton, Nevada. This project was authorized for feasibility study by Public Law 96-375, October 3, 1980. The study would evaluate the feasibility of constructing a 100-megawatt solar powerplant for integration into the Federal hydroelectric system. This proposed solar system would provide about 375,000 megawatt-hours of energy annually. It would provide an environmentally clean energy source, free from consumption of fossil fuels, and would demonstrate the feasibility of solar technology as well as assist in the early commercialization of solar technology.

The Bureau of Reclamation performed a joint study with the Department of Energy in fiscal years 1979 and 1980 which indicated a feasibility study of a 100-megawatt solar powerplant integrated into the Federal hydroelectric system is justified. The Department of Energy will also participate in the feasibility study.

Water and electric energy interests in Arizona, California, and Nevada, including the Hoover Powerplant allottees, have indicated support for the feasibility study. A solar powerplant would also provide a possible source of Federal power for Yuma Desalting Plant. This investigation is scheduled to be initiated in fiscal year 1983 and completed in fiscal year 1986.

The total estimated cost for each of the above projects and the allocations to date, planned allocation for 1982, budget request for 1983, and the balance to complete are included in a table appended to this statement.

WIND FARM PROJECT

Chairman HATFIELD. Specifically, what is the status of the Bureau's study of a potential wind farm project, particularly the study report which will be the basis for project authorization?

Mr. BROADBENT. The report has been circulated for interagency review and now is being prepared for transmittal to the Secretary of the Interior from the Commissioner for further consideration.

Chairman HATFIELD. Is the Bureau trying to identify a non-Federal interest to develop this project? What is envisioned as far as shared costs and other arrangement for non-Federal financing?

Mr. BROADBENT. The Bureau has had meetings with DOE's Western Area Power Administration, the marketing agency for the Federal hydropower, to develop the strategy to meet with power utilities and seek interest in non-Federal cost sharing for the 100-mW project. As of this date, meetings with the utilities have not been arranged.

KLAMATH OFFSTREAM STORAGE

Chairman HATFIELD. Last year, Congress provided funding to study the potential for multipurpose offstream storage in the upper Klamath Lake basin. What is the status of this study? What is the fiscal year 1983 capability?

Mr. BROADBENT. A notice of initiation of investigation was sent to the public. Work was initiated on preparation of the plan of study after discussions were held with representatives of the Pacific Power & Light Co. regarding the conduct of the study. During the remainder of fiscal year 1982, we intend to conduct hydrologic, economic, and environmental analyses of offstream storage options at the Long, Round, and Aspen Lakes sites. Multipurpose benefits to be considered include power, irrigation, recreation, and fishery.

In fiscal year 1983, hydrologic, economic, and environmental analyses, designs and estimates, and plan formulation will be completed and a report on the results of the appraisal study will be prepared.

We have requested $100,000 in the fiscal year 1983 budget. We have no additional capability.

NEW GENERAL INVESTIGATIONS

Chairman HATFIELD. What are the new investigations being started in 1983?

Mr. BROADBENT. There are 13 new plan formulation investigations in the fiscal year 1983 budget and 11 new advance planning investigations. I will provide a list for the record.

[The information follows:]

FISCAL YEAR 1983 NEW STARTS
PLAN FORMULATION

State	Project/Study	FY 1983 ($1,000)	TEC ($1,000)	Duration (years)
Colorado -	Colorado-Big Thompson Powerplants (feasibility) - Energy	50	990	4
Colorado -	Colorado River Storage Project Power Peaking Capacity Crystal Dam (feasibility) - Energy	235	1,500	4
South Dakota -	Crow Creek Indian Reservation Area (Appraisal) - Indian Development	200	350	3
Nevada -	Deep-Carbonate Aquifer Investigation (special) -Municipal and Industrial	100	130	2
New Mexico - Texas	Lake Meredith Salinity Control Project (feasibility) - Municipal and Industrial	240	880	4
California -	Lower Colorado Water Supply Study (feasibility) - Municipal and Industrial	100	275	3
Idaho-Wyoming -	Minidoka Project, North Side Pumping Division Extension (feasibility) - Irrigation	75	365	3
Nebraska -	Prairie Bend Unit, Platte River Basin (feasibility) - Irrigation	150	1,600	4
South Dakota -	Rapid City Water Supply (appraisal) - Municipal and Industrial	200	275	2
Wyoming -	Shoeshone Valley M&I Water Supply Study (appraisal) - Municipal and Industrial	200	400	3
Arizona-Nevada -	Solar/Hydro Integration Project (feasibility) - Engery	155	1,100	4
Texas -	Texas Basin Project, Columbus Bend M&I Water Supply Project (feasibility) - Municipal and Industrial	225	1,100	5
Utah -	Wasatch Front Total Water Management (special) - Municipal and Industrial	70	1,100	4
	Total Plan Formulation	2,000	10,065	

FISCAL YEAR 1983 NEW STARTS
ADVANCE PLANNING

State	Project/Study	FY 1983 ($1,000)	TEC ($1,000)	Duration (years)
Idaho-Oregon -	Boise Project, Anderson Ranch Powerplant, Third Unit - Energy	300	300	1
Colorado -	Colorado River Water Quality Improvement Program, Lower Gunnison Basin Unit - Water Quality	100	2,100	5
Colorado -	Colorado River Water Quality Improvement Program McElmo Creek Unit - Water Quality	50	2,150	5
California -	Colorado River Water Quality Improvement Program, Palo Verde Irrigation District Unit - Water Quality	50	500	3
Arizona, California, - Nevada, New Mexico, Utah, Wyoming	Colorado River Water Quality Improvement Program, Saline Water Use and Disposal Opportunities Unit - Water Quality	50	1,300	5
Utah -	Colorado River Water Quality Improvement Program, Uinta Basin Unit - Water Quality	50	2,150	5
Idaho-Wyoming -	Minidoka Project, Minidoka Powerplant Rehabilitation and Enlargement, Energy	350	350	1
Idaho-Wyoming -	Palisades Project, Palisades Powerplant Enlargement-Energy	350	600	2
Wyoming -	Shoshone Project, Buffalo Bill Dam Modification -Energy, Municipal & Industrial	150	500	3
Wyoming -	Shoshone Project, Buffalo Bill Powerplant-Energy	250	800	2
Montana -	Yellowtail Afterbay Powerplant, Energy	300	750	2
	Total Advance Planning	2,000	11,500	

REPORTS SUBMITTED TO CONGRESS IN 1981

Chairman HATFIELD. Of the reports that you completed in fiscal year 1981, how many have you submitted to the Congress showing a possible project?

Mr. BROADBENT. In fiscal year 1981, the Bureau of Reclamation completed and released to the Congress and the public 25 planning reports. Of that number, four of the six appraisal reports indicated the potential for feasibility study; two special reports indicated that either a project or further study would be desirable; and three status reports provided information at an interim point in ongoing studies. The remaining 10 reports were not supportive of continuing with the projects studied. In addition, two assessment-type reports also were completed. A list of the 25 reports will be provided.

[The information follows:]

BUREAU OF RECLAMATION LIST OF REPORTS COMPLETED IN FISCAL YEAR 1981

Appraisal

1. Silitz River basin, Oregon [1]
2. Willwood division, Shoshone project, Wyoming
3. Gibson powerplant, Montana [1]
4. Yellowtail Afterbay powerplant, Montana [1]
5. Norman project water augmentation study, Oklahoma [1]
6. Otoe-Cass unit, Nebraska

Special

1. Palo Verde Irrigation District unit, Colorado River water quality improvement project (CRWQIP) [1]
2. Saline water use and disposal opportunities, CRWQIP [1]

Status

1. Lower Gunnison basin unit, CRWQIP
2. Uinta basin unit, CRWQIP
3. McElmo Creek unit, CRWQIP

Concluding

1. City of Aberdeen, S. Dak., eastern South Dakota water supply studies (ESDWSS)
2. City of Redfield, S. Dak., ESDWSS
3. City of Miller, S. Dak., ESDWSS
4. Ventura County water supply study, California
5. Mid-Valley Canal, Central Valley project, California
6. Solano County water project, California
7. Peaking power generation, Blue Mesa Dam, Colorado
8. Allen Camp unit, Central Valley project, California
9. Butte Valley division, Klamath project, Oregon-California
10. West Sacramento Canal unit reformulation, Central Valley project, California
11. Ventura County water management project, phase II, California
12. Raton water supply project, New Mexico

Other

1. Report on Oahe unit termination study, initial stage, Oahe unit, Pick-Sloan Missouri basin program
2. Wind River basin water supply study

INVESTIGATIONS WITH RESCHEDULED COMPLETION DATES

Chairman HATFIELD. Which investigations were scheduled for completion in fiscal year 1981 but have been rescheduled for completion in fiscal year 1982?

Mr. BROADBENT. Five investigations have been rescheduled for completion in fiscal year 1982. They are Grande Ronde River basin, Oregon; Klamath project, main division A-canal cross drainage study, California-Oregon; low-head hydroelectric evaluation and inventory; lower Deschutes River basin, Oregon; and Yakima Valley water management study, Washington.

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[1] Reports indicating a possible project.

In the case of the Grande Ronde River basin and lower Deschutes River basin, both investigations were rescheduled for fiscal year 1982 because delays in the field review process of the appraisal report lengthened the study time.

The Klamath project, main division A-canal cross drainage was rescheduled for fiscal year 1982 due to delays in execution of the contract for work in connection with the study.

Low-head hydroelectric evaluation and inventory study was delayed to fiscal year 1982 due to the unexpected large number of potential sites requiring investigation.

The Yakima Valley water management study was delayed to fiscal year 1982 because of the need to utilize personnel for work on the Yakima River basin water enhancement project.

Chairman HATFIELD. The fiscal year 1983 budget justifications show 19 studies scheduled for completion in fiscal year 1982. Are there any recent changes to the completion date schedule?

Mr. BROADBENT. No; the fiscal year 1983 budget justifications represent the most recent schedule of investigation completion dates. We will provide a list of those completing in 1982.

[The information follows:]

INVESTIGATION SCHEDULED FOR COMPLETION IN FISCAL YEAR 1982

Appraisal

1. Grande Ronde River basin, Oregon
2. Lower Brule Indian Reservation area, South Dakota
3. Lower Deschutes River basin, Oregon
4. Palo Verde hydropower project, California

Feasibility

1. CRSP power peaking capacity, generation at outlet-Glen Canyon, Arizona
2. CRSP power peaking capacity, Utah Lake unit, Utah
3. Dominguez Reservoir project, Colorado
4. Fort Benton reformulation, Montana
5. Lower James-Fort Randall water diversion proposal, South Dakota
6. Texas basins project, Big Cow Creek project, Texas

Special

1. Farwell unit water conservation study (P-SMBP), Nebraska
2. Hermiston water conservation, Oregon
3. Klamath project, main division, A-canal cross drainage study, California and Oregon
4. Low-head hydroelectric evaluation and inventory
5. Northern Great Plains wind energy study, Montana, Wyoming, North Dakota, and South Dakota
6. Upper Platte River study, Nebraska, Wyoming, and Colorado
7. Upper Snake River water management study, Idaho and Wyoming
8. Yakima Valley water management study, Washington
9. Llano Estacado playa lake water resources study, New Mexico, Texas, Colorado, Kansas, and Oklahoma

Chairman HATFIELD. How many investigations are scheduled for completion in fiscal year 1983?

Mr. BROADBENT. In fiscal year 1983, there are 11 investigations scheduled for completion. We will provide a list for the record.

[The information follows:]

INVESTIGATIONS SCHEDULED FOR COMPLETION IN FISCAL YEAR 1983

Appraisal

1. Idaho anadromous fish habitat restoration, Idaho
2. Upper Klamath offstream storage study, Oregon
3. Offstream storage, Yellowstone River, Montana

Feasibility

1. Santa Cruz Dam and Reservoir study, New Mexico
2. Wind-hydroelectric energy project, Wyoming

Special

1. Central California-Nevada wind energy study, California and Nevada
2. Delta support studies
3. Water conservation opportunities, Imperial Irrigation District, California
4. Hydropower at existing facilities—Caballo Dam low-head hydropower study, New Mexico
5. Nueces River basin study, Texas
6. Solomon River basin water management study, Kansas

Ongoing Studies With Changed Completion Dates

Chairman HATFIELD. Which investigations have had the completion date changed from that shown in the fiscal year 1982 budget justifications?

Mr. BROADBENT. Compared to the fiscal year 1982 budget justification, we have changed the completion dates of 24 investigations in the fiscal year 1983 budget because of premature conclusions or rescoping requirements. Four are being concluded prematurely, 5 have been rescheduled for early completion, and 15 have been delayed for various reasons which are explained in the budget justification material. None have been extended due to lack of funds.

The investigations prematurely concluded are CRSP power peaking capacity, generation at outlet-Glen Canyon; CRSP power peaking capacity, Utah Lake unit; Fort Benton reformulation; and Lower James-Fort Randall water diversion proposal.

The studies which have been rescoped to result in an earlier completion date are central California-Nevada wind energy study; delta support studies; geothermal resources investigations; northern Great Plains wind energy; and hydropower at existing facilities.

The extended studies are Grande Ronde River basin; lower Deschutes River basin; Tularosa basin water and energy study; Rogue River basin project, Grants Pass division; Rogue River basin project, Medford division reformulation; Umatilla basin project; upper John Day project; Yakima River basin water enhancement project; Central Valley project, enlarged Shasta Lake investigation; CRSP power peaking capacity, Dunham Point unit; Texas basins project, Bon Wier project; Yakima Valley water management study; Central Valley fish and wildlife management study; Klamath project, A-canal cross drainage study; and low-head hydroelectric evaluation and inventory.

Continuing Investigations

Chairman HATFIELD. Which investigations are continuing after 1983?

Mr. BROADBENT. There are 32 investigations which are continuing after 1983. A list will be provided for the record.

[The information follows:]

INVESTIGATIONS CONTINUING AFTER FISCAL YEAR 1983

Appraisal

1. Tularosa basin water and energy study, New Mexico
2. Central South Dakota water studies, South Dakota
3. Crow Creek Indian Reservation area, South Dakota
4. South Dakota water deliveries
5. Shoshone Valley M. & I. water supply, Wyoming
6. Rapid City water supply, South Dakota

Feasibility

1. Boise project, power and modification study, Idaho-Oregon
2. Hungry Horse powerplant enlargement and reregulating reservoir
3. Rogue River basin project, Grants Pass division
4. Rogue River basin project, Medford division
5. Umatilla basin project, Oregon
6. Upper John Day project, Oregon

7. Yakima project, Cle Elum and Tieton powerplants
8. Yakima River basin water enhancement project, Washington
9. Central Valley project, delta division, Kellogg unit reformulation
10. Enlarged Shasta Lake investigation
11. San Joaquin drainage investigation
12. Colorado River water quality improvement program
13. Santa Margarita project, California
14. CRSP power peaking capacity studies
15. CRSP generation at outlet-Flaming Gorge
16. CRSP Dunham Point unit
17. Texas basins project, Bon Wier project
18. Garrison diversion unit M. & I. water facilities
19. Tiber powerplant, Montana
20. North Platte River hydroelectric power study
21. Guernsey Dam powerplant enlargement, Wyoming

Special

1. Central Valley fish and wildlife management study
2. Geothermal resource investigation
3. Lower Colorado River water conservtion and efficient use program, Arizona, California, Nevada, and Utah
4. El Vado Dam low-head hydropower study, New Mexico
5. Republican River basin water management study

INVESTIGATIONS WITH FISCAL YEAR 1981 COMPLETION DATES

Chairman HATFIELD. The fiscal year 1982 budget justifications showed certain studies scheduled for completion in fiscal year 1981. What is the current status of these investigations?

Mr. BROADBENT. We will provide a list.

[The information follows:]

INVESTIGATION	STATUS
Appraisal investigations	
Boise project, power and modification study, Idaho-Oregon	Will be reported on as part of ongoing feasibility study.
Central Valley project, Sacramento River division, Red Bluff division, dam powerplant, California	Report released.
Central Valley project, Shasta division, Keswick powerplant enlargement, California	Report being prepared.
Grand Ronde River basin, Oregon	Rescheduled for fiscal year 1982 due to delay in preparation of draft report. Report being prepared.
Lower Deschutes River basin, Oregon	Rescheduled for fiscal year 1982 due to delay in preparing draft report. Report being prepared.
Orland project, Stony Gorge-East Park powerplants, California	Report released.
Owyhee project, Owyhee powerplant, Idaho-Oregon	Formulation working document completed and scheduled for release.
Truckee River basin, Boca-Prosser powerplant, California	Report being prepared.
Whipple wash pump-storage project, California	Report being prepared.
Yakima project, Cle Elum and Tieton powerplants, Washington	Will be reported on as part of ongoing feasibility study.

FEASIBILITY REVIEW PROCESS

Chairman HATFIELD. Are there any significant changes in the process for reviewing planning feasibility reports? What impact will this have on the Bureau's planning process?

Mr. BROADBENT. Yes; on September 17, 1981, the President issued Executive Order 12322 which returned to the Office of Management and Budget the responsibility for examining each project proposal and revoked Executive Order 12113 which had established a review function under the Water Resources Council. It is difficult to determine what impact will occur with respect to Executive Order 12322.

CENTRAL VALLEY PROJECT, SHASTA DIVISION, ENLARGED SHASTA LAKE INVESTIGATION

Chairman HATFIELD. The total estimated cost of the enlarged Shasta Lake feasibility investigation was increased $1,215,000. Please elaborate on the reason for the large increase.

Mr. BROADBENT. The total estimated cost has been increased in order to conduct appraisal-level studies which would allow for a more complete development of alternatives prior to plan selection for feasibility analyses and for the classified pay raise. Other reasons for the increase are the need to study the Sites Reservoir alternative and to address the impact of the project on the Sacramento-San Joaquin delta, the Suisun marsh, and the San Francisco Bay.

SOLAR/HYDRO INTEGRATION PROJECT, ARIZONA AND NEVADA

Chairman HATFIELD. Why are you proposing to intiate the solar/hydro integration project investigation instead of the Department of Energy?

Mr. BROADBENT. A joint preliminary study was conducted with the Department of Energy in 1979 and 1980. We received authorization for this feasibility study in Public Law 96–375, dated October 3, 1980. The study is to be conducted on a coordinated interagency basis.

We propose to conduct the study because we have the necessary expertise and capability. The Department of Energy will have considerable input such as the design of the solar central receiver powerplant. We will perform the necessary operational evaluations for integrating the solar power with the existing hydroelectric system. The Western Area Power Administration segment of the Department of Energy will conduct the power marketing studies.

COLORADO RIVER WATER QUALITY IMPROVEMENT PROGRAM

Chairman HATFIELD. In fiscal year 1983 you are requesting $5.8 million for the Colorado River water quality improvement program. What will you accomplish with the funds on this plan formulation investigation?

Mr. BROADBENT. Work programed for fiscal year 1983 entails continuing efforts to identify individual problem areas and develop alternative control plans. Feasibility-level investigations will continue on the Glenwood-Dotsero Springs, Big Sandy River, Dirty Devil River, Price-San Rafael, and stage II of the lower Gunnison basin units. Investigations on the McElmo Creek and stage I of Uinta basin units will be completed and feasibility reports prepared. Monitoring activities will continue on the Meeker Dome unit and plan formulation activities will be initiated on stage II of the Uinta basin unit. Support work will continue through fiscal year 1983 on development of the Colorado River simulation system model, along with research work and contracts on reservoir salt precipitation, evaporation, and desalting pretreatment studies, and constituent identification source and analysis work.

Chairman HATFIELD. What is the purpose of the Colorado River water quality improvement program?

Mr. BROADBENT. The purpose is to develop a comprehensive and cost-effective program for salinity control in the Colorado River basin. Salinity standards, including numeric criteria for the lower mainstem, were established in 1975. The investigation activities were authorized by Public Law 93–320, June 24, 1974, and Public Law 96–375, October 3, 1980. Additional development of the basin's water resources will generate increases in the salinity levels and consequent violations of the standards unless salinity control measures are implemented. Natural sources contribute the largest share of the salt load; however, return flows from irrigation, municipal, and industrial uses also make significant contributions. The salt load is concentrated into smaller volumes of water by out-of-basin exports, evapotranspiration by irrigated crops and evaporation from free-water surfaces further increasing salinity concentrations.

The Colorado River water quality improvement program is identifying individual problem areas, developing alternative control plans, and recommending remedial action. In addition to the physical control units, several support studies are underway including development of river simulation models. Research activities include investigation of the relationship between irrigation efficiency and salt loading, land and channel processes contributing to the salt load from diffuse sources, evaporation pond cost reduction, and the phenomenon of salt precipitation in reservoirs.

INCREASE OF TOTAL COST

Chairman HATFIELD. Why has the total estimated cost for the Colorado River water quality improvement program increased by $4 million from your fiscal year 1982 budget to $50 million in the 1983 budget?

Mr. BROADBENT. The total estimated cost increased $4,628,000, due to expanded appraisal and verification studies for industrial uses of saline water, development on the Colorado River simulation system model, constituent ion identification source and analysis work, classified pay raises, delays resulting from budgetary restraint, and program coordination activities.

DELTA SUPPORT STUDIES, CALIFORNIA

Chairman HATFIELD. You are requesting only $350,000 in your fiscal year 1983 budget for the delta support study and you indicate that beginning in fiscal year 1984, needed work on the Sacramento-San Joaquin estuary will be funded from various appropriations. Please explain.

Mr. BROADBENT. Beginning in fiscal year 1983 we will begin to phase out the delta support study as a specific line item in the plan formulation portion of the general investigation program. On this basis, beginning in fiscal year 1983, we will still conduct studies but will fund them from construction, operations and maintenance, and general investigations appropriations based on anticipated benefits received. We will provide $150,000 each from the construction and operation and maintenance appropriations to cover some of the needed studies in fiscal year 1983.

UPPER PLATTE RIVER STUDY

Chairman HATFIELD. I understand that the Bureau of Reclamation report on the upper Platte River study is behind schedule; please explain. Why is the Bureau having difficulty identifying water use alternatives?

Mr. BROADBENT. The Bureau's portion of the three-agency investigation is about 1 year behind schedule due to difficulties encountered in determining the various water use alternatives to be displayed. Difficulties occurred, but are now resolved, in the computer modeling of the Platte River hydrology relative to future upper basin surface water depletions of the various alternatives.

We expect to complete the Bureau study report this summer after which an integrated report will be prepared that will reflect involvement of all three agencies—the Fish and Wildlife Service, the Geological Survey, and the Bureau of Reclamation—and the three affected States: Colorado, Nebraska, and Wyoming.

LEASE OF POWER PRIVILEGE CHARGE

Chairman HATFIELD. What is the Department of the Interior's policy on charging for the use of its facilities for hydropower development?

Mr. BROADBENT. Interior is presently reviewing a lease of power privilege charge that will establish a Department policy on charging non-Federal interests for the development of power potential at Interior facilities. When a fair and reasonable charge policy is approved by the Secretary, we will discuss our charge policy with Federal Energy Regulatory Commission to determine an appropriate method of assessing the charge. We would prefer to combine their charge and our charge into one Federal charge. We generally oppose their present charge policy since it does not incorporate a method of increasing the charge on an annual basis as the price of energy increases.

INCREASING ENERGY GENERATION AT EXISTING FACILITIES

Chairman **HATFIELD**. Are you placing high priority in enlarging existing powerplants in order to obtain information soon which will aid us in making decisions about increasing domestic energy production?

Mr. **BROADBENT**. Increasing domestic energy production, especially enlarging existing powerplants and adding powerplants at existing facilities, has very high priority in our program. We have three ongoing investigations related to energy production at existing facilities scheduled for completion in fiscal year 1982. Eleven ongoing investigations will continue through fiscal year 1982 and six additional new starts are scheduled in fiscal year 1983. We will provide a list for the record.

[The information follows:]

INVESTIGATIONS ASSOCIATED WITH INCREASING ENERGY GENERATION AT EXISTING WATER RESOURCE FACILITIES

To be completed in fiscal year 1982

1. Colorado River storage project power peaking capacity, generation at outlet-Glen Canyon unit, Arizona
2. Low-head hydroelectric evaluation and inventory
3. Palo Verde hydropower project, California

Ongoing investigations continuing through fiscal year 1983

1. Boise project, power and modification study, Idaho-Oregon
2. Central Valley project, enlarged Shasta Lake investigation, California
3. Colorado River storage project power peaking capacity, Dunham Point unit, Colorado
4. Colorado River storage project power peaking capacity, generation at outlet-Flaming Gorge unit, Utah
5. Guernsey Dam powerplant enlargement, Wyoming
6. Hungry Horse powerplant enlargement and reregulating reservoir, Montana
7. Hydropower at existing facilties—Caballo Dam low-head hydropower study, New Mexico
8. Hydropower at existing facilities—El Vado low-head hydropower study, New Mexico
9. North Platte River hydroelectric power study, Wyoming
10. Tiber powerplant, Montana
11. Yakima project, Cle Elum and Tieton powerplants, Washington

Proposed new investigations in fiscal year 1983

1. Colorado River storage project power peaking capacity, Crystal Dam, Colorado
2. Boise project, Anderson Ranch powerplant third unit, Idaho (advance planning)
3. Minidoka project, Minidoka powerplant enlargement, Idaho (advance planning)
4. Palisades project, Palisades powerplant enlargement, Idaho (advance planning)
5. Pick-Sloan Missouri basin program, Yellowtail Afterbay powerplant, Montana (advance planning)
6. Shoshone project, Buffalo Bill powerplant, Wyoming (advance planning)

SAVINGS RESULTING FROM RESEARCH PROGRAM

Chairman **HATFIELD**. Give some examples where research has produced substantial savings while contributing to the Nation's technological advancement.

Mr. **BROADBENT**. Net savings on current Bureau projects that have resulted from research accomplishments are conservatively estimated at many millions of dollars a year. These savings are only a part of the total value of such investigations because the new materials, methods, and concepts resulting from studies can often be applied to later projects. Other governmental and private organizations throughout the world profit and greater operational efficiency and structural safety are realized.

Specific examples of savings are $14 million annually through proper use of integrated mechanical, chemical, and biological weed control techniques; an estimated savings of $1 million through improved control of Grand Coulee generation and an estimated savings of $2 million through development and use of a line status transducer for use in power system automation; an estimated savings of $1 million at Grand Coulee through use of a new cable test method; and over $10 million savings at

Buckskin Mountains tunnel through tunnel lining sealant research. The use of fly ash for a typical canal lining job on the Central Arizona Project saves energy due to replacement of cement and about $100,000 in materials cost.

WATER RESOURCES PLANNING AND RESEARCH

Chairman HATFIELD. What work has been accomplished in your water resources planning and engineering research program?

Mr. BROADBENT. Planning and engineering research started in 1960 and is conducted to improve project planning and evaluation techniques and to solve design, construction, and maintenance problems. It emphasizes water management techniques, dam safety, economic and sociological aspects of water resources development, water quality, environmental factors, engineering materials, electric power system stability and control, and applications of new energy technology. In the various areas of research, good progress was made on most projects. Ten projects were completed in fiscal year 1981 and results were furnished to users.

Chairman HATFIELD. What work is currently scheduled and underway and what work is scheduled for fiscal year 1983?

Mr. BROADBENT. This is a continuing program with 102 individual items under 4 general categories involving water supply augmentation and conservation, water quality and ecology, planning research, and engineering research. The studies will provide knowledge, data, and concepts needed so the Bureau can effectively assist the Nation in conserving and developing its water, hydropower, and land resources. New research includes improved turbine efficiency; control of hydraulic transients; demonstration of a new variable speed, constant frequency motor-generator; soil bearing capacity for footings on slopes; use of fuse plugs for dam safety; site evaluation of dispersive soil; properties of rockfill dams; development of a new labyrinth spillway; stress in mitered pipe bends; and development of a wind turbine data system.

In fiscal year 1983, increased program levels are planned for high-priority research projects in water conservation, dam safety, water quality and ecology, water resources planning, advanced energy applications, and engineering research. In dam safety research, an estimated four new projects will be started. Two new projects in advanced energy applications research and five projects in planning research will be initiated.

NEW ADVANCE PLANNING STUDIES

Chairman HATFIELD. Funds are requested for 11 new advance planning studies. How were these studies selected?

Mr. BROADBENT. The new studies contained in the advance planning category were selected because they represent, as a group, our most worthy projects that could lead to early implementation with necessary funding and authorization. Anderson Ranch powerplant, Buffalo Bill powerplant, Minidoka powerplant, Palisades powerplant and Yellowtail Afterbay powerplant studies shown in the budget, all involve needed hydropower development at existing facilities, are feasible, enjoy favorable support, and are included in S. 306 which would authorize construction of the projects.

Buffalo Bill Dam modification is a feasible project with emphasis on meeting power and municipal and industrial needs and legislation is pending before Congress in S. 1409 which would authorize construction on the project.

The remaining five new studies involve units of the Colorado River water quality improvement program which enjoy extensive support by the Colorado River basin States. The Congress, in Public Law 93-320, directed the Secretary to expedite the planning and implementation of the Colorado River water quality improvement program. They have been selected because completed studies indicate that the units are cost effective in meeting near-term and projected salt-loading reductions necessary to maintain water quality levels in the Colorado River while allowing basin States to develop their apportioned water.

WORK ON CONTINUING PROJECTS, CONSTRUCTION PROGRAM

Chairman HATFIELD. You are requesting $666.6 million for the construction program in fiscal year 1983. What portion of this is for new work on continuing projects?

Mr. BROADBENT. The fiscal year 1983 funding request will continue work on 70 ongoing projects and 2 preconstruction planning projects. New work in fiscal year 1983 includes 4 rehabilitation and betterment initiatives and 26 major construction contracts. The amount of $124.3 million for new work represents 19 percent of the 1983 construction budget. The remaining amount of $542.3 million will finance contractor earnings.

NEW CONSTRUCTION STARTS

Chairman HATFIELD. Would you elaborate on those projects for which planning has advanced to the stage that construction could be started in fiscal year 1983?

Mr. BROADBENT. Yes; we have five authorized projects which could be advanced to the construction stage in fiscal year 1983. The projects considered were evaluated using the following criteria: Status of construction prerequisites, multipurpose benefits with emphasis on energy, local support, local cost sharing, and benefit-cost ratio.

The Animas-La Plata project has excellent State and local support and the State of Colorado is considering cost sharing the construction of the project. The project, with a direct benefit-cost ratio of 1.1 to 1, is multipurpose and offers the best hope for a solution to Indian versus non-Indian water rights litigation in southwestern Colorado. All construction prerequisites have been accomplished.

The Grass Valley debris dam was authorized by Public Law 96-335, September 4, 1980. Although the project has strong local support and is being cost shared by the State of California, it is a single-purpose project for fishery enhancement/mitigation. All of the construction prerequisites have not yet been accomplished.

The Salmon Falls division was authorized by Public Law 92-514, October 20, 1972. This is a multipurpose project including agricultural water service and fish and wildlife enhancement. It has a favorable benefit-cost ratio of 1.2 to 1.0 based on direct benefits. Although the definite plan studies are essentially complete, controversy exists between the State of Idaho, local irrigators, and the Bureau of Reclamation over the water rights for the project. Additional hydrologic studies are underway in an attempt to resolve the water rights issue.

The Polecat Bench area is authorized under Public Law 94-228, March 1976. This project has good local support and all the construction prerequisites are complete except for land certification and approval of the definite plan report. However, this project provides only limited benefits with no interest in cost sharing. The benefit-cost ratio is 1.1 to 1.0 for direct benefits.

The Narrows unit was authorized under Public Law 91-389, August 28, 1979. This project has good support from the State of Colorado which is considering cost sharing the construction of the project; however, there is some opposition from landowners and environmentalists. Additional legislation will be required to increase the appropriation ceiling of the project. All construction prerequisites have been accomplished. The benefit-cost ratio is 1.1 to 1.0 for direct benefits.

FISCAL YEAR 1983 COMPLETED PROJECTS

Chairman HATFIELD. How many of the construction projects will be completed in fiscal year 1983?

Mr. BROADBENT. Four projects are scheduled to complete in fiscal year 1983. They are the Mountain Park project; San Angelo project; Milk River project, Lake Sherburne Dam; and the Strawberry Valley project.

NARROWS UNIT, COLORADO

COST SHARING PROPOSED

Chairman HATFIELD. Please elaborate on the State of Colorado's proposal to fund a share of the construction costs of the Narrows unit.

Mr. BROADBENT. The 1981 legislature created the Colorado Water Resource and Power Development Authority and provided it with a $30 million fund for use in project development. The Governor of Colorado recently signed a joint resolution of the State legislature which recommends use of $25 million of the authority's fund to match Federal funds for initial construction of both the Narrows and the Animas-La Plata projects. Furthermore, the Governor has included in his 5-year capital improvements program, funds equal to about 10 percent of these projects' costs.

CENTRAL VALLEY PROJECT, CALIFORNIA

Chairman HATFIELD. We note that the cost allocations for the Central Valley project have decreased from the fiscal year 1982 budget justifications. Please explain.

Mr. BROADBENT. The decrease in the cost allocations for the Central Valley project from the fiscal year 1982 budget justifications is due to the elimination of Marysville Dam and Reservoir and the Allen Camp unit from the Central Valley project. Marysville Dam and Reservoir has been eliminated because the Corps of Engineers can no longer recommend construction due to diminished State and local support. The Allen Camp unit was eliminated because this unit has been determined not to be economically feasible to construct.

SAN LUIS UNIT, CALIFORNIA

AUTHORIZED CEILING

Chairman HATFIELD. Does the total estimated cost for San Luis unit distribution and drainage system exceed the authorized ceiling? If so, please explain.

Mr. BROADBENT. Yes. Congressional appropriations through fiscal year 1977 totaled $208,963,713; however, because of the need for additional appropriation ceiling, Public Law 95–46 was enacted which raised the ceiling to $240,013,713. Later in 1977, a comprehensive review of all costs charged against the Westlands Water District distribution system resulted in a reduction of $3,837,402 in funds available for the San Luis unit. The authorized appropriation ceiling is $236,176,311 and cannot be indexed.

Since 1977 the total estimated cost of the work has risen to $859,672,220. Inflation accounts for approximately $256.6 million and an additional $221.9 million is required for realinement of the San Luis drain outlet. Another $145 million is needed because of an increase of 126,000 acres to the service area and to concrete line the San Luis drain because of concerns for ground water quality.

Chairman HATFIELD. Has the lack of an increase in the appropriation ceiling required you to defer any work on the San Luis unit?

Mr. BROADBENT. Yes; major San Luis unit distribution and drainage system work has been delayed because of a need for an increase in the appropriation ceiling. Reauthorization of the unit is necessary, but environmental problems associated with the San Luis drain north of Kesterson Reservoir must be resolved before we ask Congress for an increase in the appropriations ceiling. Several major contracts pertaining to completion of Westlands Water District distribution and drainage system facilities have been deferred as has work on the southernmost portion of the drain.

REPAYMENT CONTRACT

Chairman HATFIELD. What is the status of negotiations on a repayment contract with the Westlands Water District involving the San Luis unit?

Mr. BROADBENT. On July 24, 1981, Westlands filed a complaint for declaratory and injunctive relief against the United States. Negotiations on amendatory repayment and water service contracts have been suspended pending resolution of this legal action.

The principal issues the court has been asked to resolve are:

1. Whether the district has a right to 1,100,000 acre-feet of water from the San Luis unit at $7.50 per acre-foot, plus 50 cents per acre-foot drainage charge and whether the district has a right to 50,000 acre-feet from the Mendota pool at $3.50 per acre-foot.
2. Whether irrigation water service is authorized to areas of Westlands outside of the service area identified in the 1955 feasibility report for the San Luis unit.
3. Whether the San Luis drain is a main project feature of the Central Valley project or whether it is a facility to be specifically repaid by Westlands.

A court-approved stipulation has been entered into with Westlands allowing water deliveries to continue until the litigation is settled or December 31, 1984, whichever occurs first. Westlands will pay the Federal rates for water. However, the difference between the per acre-foot Federal rates, $13.30 and $9.30, and the rates Westlands contends it is entitled to, $7.50 and $3.50, plus 50 cents per acre-foot for drainage service, will be deposited in an interest-bearing trust fund. The court will determine the disposition of the trust fund resolution of the litigation. Municipal and industrial water rates also are an issue, but a minor one compared to the agricultural water rate issue.

AUBURN DAM, CALIF.

Chairman HATFIELD. Why are you conducting more studies on Auburn Dam?

Mr. BROADBENT. More studies are being conducted to satisfy concerns of the State of California regarding the economics of the project and impacts the project would have on recreation and fishery values in the lower American River below the dam. Work is in progress on the Folsom South-lower American River alternatives studies to establish the details of a plan to protect the lower American River and to prepare economic analyses of the total plan. The present schedule for this study indicates that essentially all of the data, including the economic analyses and an advanced draft of the special report and supplemental environmental statement, will be completed in December 1982.

Preparation and processing of the special report and supplemental environmental statement will be completed by December 1983. Besides the preparation of the report, a cost allocation and repayment analysis of the expanded unit also will be prepared.

Although a safe dam can be constructed at the present Auburn damsite, we believe that the plans being considered will also satisfy concerns raised by the State and provide the information required to decide on what course of action to pursue in proceeding with the Auburn Dam.

REAUTHORIZATION OF AUBURN DAM

Chairman HATFIELD. What is being done to resolve the issue of reauthorization of Auburn Dam?

Mr. BROADBENT. A number of questions must be answered before the unit can be presented to the Congress for an increased appropriation ceiling. Also, a comparative analysis of the benefits and costs of the project is being done under differing discount rates and evaluation procedures. This work will not only satisfy the applicable procedural requirements, but also give the Congress and the public a factual and realistic look at this project under modern planning techniques. These studies are underway and will be essentially complete by October 1 of this year.

AUBURN FOLSOM SOUTH UNIT

Chairman HATFIELD. What is the Department of the Interior's position regarding construction of Auburn Dam?

Mr. BROADBENT. In December 1980, the Secretary of the Interior determined that a safe dam could be constructed at the present Auburn damsite. He concluded that a concrete gravity dam and a powerplant with an initial installed capacity of 300 megawatts and an ultimate expansion capability to 600 megawatts was the best design for safety purposes. However, it was decided that the Department of the Interior would not seek the necessary reauthorization of the project until there is a satisfactory resolution of the following concerns: Overall economic viability, escalating costs, and potential adverse environmental impacts, particularly the lower American River flow issues. Detailed studies by the Bureau of Reclamation to resolve satisfactorily these concerns have been undertaken. The studies are expected to be completed in January 1983.

SAN FELIPE DIVISION, CALIFORNIA

Chairman HATFIELD. What work is scheduled and underway in 1982 on the San Felipe division? What work is scheduled for fiscal year 1983?

Mr. BROADBENT. In fiscal 1982, construction of Pacheco tunnel, reach 2, and Santa Clara tunnel will continue, as well as preconstruction work on other features. Manufacturing of the pumps, motors, and valves for Pacheco pumping plant will continue.

During 1983 construction of Pacheco tunnel, reach 2, and Santa Clara tunnel is scheduled to be completed. Contracts are scheduled to be awarded for Santa Clara conduit, section 1, Pacheco pumping plant and Pacheco conduit, section 1.

Preconstruction work and acquisition of rights-of-way will be in progress for Santa Clara conduit, section 2; Pacheco conduit, section 2; Coyote pumping plant; Hollister conduit, section 2; and San Justo Dam and Reservoir.

PACHECO CONDUIT, SAN FELIPE DIVISION

Chairman HATFIELD. Last year, Congress provided an additional $2.5 million of write-in funds to expedite work on the Pacheco conduit of the San Felipe division. What work was accomplished with the additional funds?

Mr. BROADBENT. No work was accomplished; a fiscal year 1982 award was not made due to severe personnel constraints compounded by the San Luis Dam emergency repair. Many of the design and manpower resources that were to be utilized on expediting Pacheco conduit had to be used for other priority work. Pacheco conduit is now scheduled for award in 1983.

CENTRAL VALLEY PROJECT, SACRAMENTO RIVER DIVISION, CALIFORNIA

Chairman HATFIELD. You are requesting $11,856,000 for the Sacramento River division. What work is scheduled for fiscal year 1983?

Mr. BROADBENT. This division of the Central Valley project is 77 percent complete. In 1983, contracts will be awarded for pumping plants for Westside Water District No. 2 and Glenn Valley Water District, pumping plants and distribution systems for Colusa County Water District contract Nos. 3 and 3A, Arbuckle operation and maintenance suboffice, safety fence along the Corning Canal, deer fence along the Tehama-Colusa Canal, modification of farm bridges, and Corning Canal pump units. Construction will be completed on wasteways for reaches 7 and 8 of the Tehama-Colusa Canal, pumping plants for Colusa County Water District contract No. 2B, distribution system for Orland-Artois units Nos. 2 and 3, and automation and remote control of Tehama-Colusa Canal. Supplemental irrigation service to 28,004 acres will become available in fiscal year 1983. Completed work includes the Corning Canal, Corning Canal pumping plant and relift facilities, Corning Canal Water District distribution system, recreation facilities, operation and maintenance housing, Red Bluff diversion dam and reservoir, the Red Bluff diversion dam access road, reaches 1 through 8A of the Tehama-Colusa Canal, and pumping plants for Kanawha Water District, Improvement District Nos. 1 and 2, and Orland-Artois Water District, unit No. 1.

CENTRAL VALLEY PROJECT—MISCELLANEOUS PROJECT PROGRAMS, CALIFORNIA

Chairman HATFIELD. What work is scheduled for fiscal year 1983 for the miscellaneous project programs?

Mr. BROADBENT. These features are 98 percent complete. All major project facilities included in this program are complete and in operation with the exception of the final unit of the El Dorado Irrigation District distribution system. During 1983, rehabilitation of the Friant-Kern Canal will be completed. Work will continue on rehabilitation of the Delta-Mendota Canal and monitoring of the interim improvement measures for fish, wildlife, and watershed restoration in the Trinity River basin comprehensive action program.

FRYINGPAN-ARKANSAS PROJECT, COLORADO

Chairman HATFIELD. Please expand upon the reasons for the 8-month delay in getting the second 100,000-kilowatt unit on line at Mt. Elbert pumped storage powerplant on the Fryingpan-Arkansas project.

Mr. BROADBENT. Power generation from unit 2 is now scheduled for May 1984, a delay of 8 months from that scheduled in last year's budget. The assembly of unit 2 was completed several months ago but the generator manufacturer failed to furnish the electrical wiring diagrams to connect the control units for operations.

TWIN LAKES DAM

Chairman HATFIELD. There has been some news media accounts of seepage at the Twin Lakes Dam on the Fryingpan-Arkansas project. Please explain.

Mr. BROADBENT. Construction was completed on the structure during fiscal year 1981. Upon initial filling, more seepage passed under the dam than anticipated. Investigations and studies are currently underway to determine the best remedial measure to control the seepage. Remedial work is scheduled to be completed during fiscal year 1983.

The seepage is not a threat to the safety of the dam at this time. The remedial measures will alleviate any safety threats this seepage might have created.

FISH HATCHERY AT PUEBLO DAM

Chairman HATFIELD. What is the status of the contract for design and construction of the fish hatchery at Pueblo Dam on the Fryingpan-Arkansas project?

Mr. BROADBENT. A contract was awarded to the State of Colorado for design of the fish hatchery on November 19, 1980. Design completion is scheduled for this summer. A contract for construction of the fish hatchery is scheduled for award in the fall of 1983, with completion of construction in 1985. Budgetary limitations forced a delay of 1 year in the construction of the fish hatchery.

MITIGATION PLAN FOR CLOSED BASIN DIVISION

Chairman HATFIELD. What is the current status of your proposed new mitigation plan for the Closed Basin division?

Mr. BROADBENT. The Department is presently processing a legislative package for authorization of our revised mitigation plan. The departmental Solicitor has determined that replacement of the Mishak Wildlife Refuge with the proposed Russell Lakes Wildlife Management Area is a major change and legislative authority is required.

SAN LUIS VALLEY PROJECT—CLOSED BASIN DIVISION, COLORADO

Chairman HATFIELD. Why is a supplemental to the final environmental statement required on the Closed Basin division of the San Luis Valley project?

Mr. BROADBENT. The final statement did not address project mitigation; therefore, a supplement to the final environmental statement is being prepared to address the revised mitigation plan and other refinements to the project. The mitigation authorized by Public Law 92-514 on October 20, 1972, provided for establishment of the 13,000-acre Mishak National Wildlife Refuge and furnishing a water supply of 12,500 acre-feet annually for the operation of the refuge. The water supply was to be provided through exchange of surface runoff. However, since the project was first planned, surface water inflows to the Mishak National Wildlife Refuge Area have been reduced to as little as 500 acre-feet per year through more efficient upstream use. Deliveries of water to sustain the Mishak National Wildlife Refuge would need to be supplied by pumping ground water. Since these pumped waters cannot be replaced and would result in a decrease in total water delivered to the Rio Grande, a viable refuge cannot be justified. Also, additional data gathered and analyzed has indicated that less mitigation is required than originally proposed. Therefore, a revised mitigation plan was developed.

MCGEE CREEK PROJECT, OKLAHOMA

Chairman HATFIELD. Last year, Congress placed language in the energy and water development appropriation bill with regard to land acquisition on the McGee Creek project. Please explain what impact that language will have.

Mr. BROADBENT. Following the passage of last year's Appropriation Act, we reviewed section 205 concerning the acquisition of land for the McGee Creek project. We evaluated this provision in light of previous agreements made during the planning of the McGee Creek project and addressed in the final environmental statement. We decided that the method of acquisition directed by the Appropriation Act was a significant change in the project plan and that a supplement to the final environmental statement was needed to keep us in compliance with the National Environmental Policy Act.

We are developing stipulations to protect the integrity of the project and allow mineral development in the wildlife and scenic areas. We are following an orderly course of modifying the project plan to accommodate mineral development and NEPA compliance with a view toward completing the plan revision and supplement to the environmental statement within 1½ years.

On January 20, 1982, a notice of intent to prepare a suplement to the final environmental statement was published in the Federal Register.

APPROPRIATION CEILING, MCGEE CREEK PROJECT

Chairman HATFIELD. What has caused your current estimate for the McGee Creek project to exceed the appropriation ceiling?

Mr. BROADBENT. The discovery of dispersive clay in the fill material to be used for the dam embankment required a new design to assure structural safety. The new design differed substantially from the feasibility designs upon which authorization was based. The flatter side slopes with attendant lengthening of the outlet works structures resulted in a new estimate for the dam that is nearly twice the cost of the feasibility estimate. Even though our current estimate exceeds the indexed appropriation ceiling, the differential is less than the amount for contingencies.

SOUTHERN NEVADA WATER PROJECT, SECOND STAGE, NEVADA

Chairman HATFIELD. What caused the 1-year delay in the completion of the southern Nevada water project? What impact will this delay have on the water users?

Mr. BROADBENT. The State of Nevada has had considerable difficulty in providing design data for the automated control system. These problems are primarily caused by interfacing current control technology with the existing control system to avoid future operating control problems. These problems are nearing solution.

Although the initial water delivery date has slipped from September 1981 to March 1982, water will be provided prior to the peak demand period by utilizing manual control.

The city of Henderson in the vicinity of the Mesa lateral, has the most critical shortage. The project could have provided water to the area in May 1981; however, the city of Henderson did not have the facilities to accept delivery.

SOUTHERN NEVADA WATER PROJECT, FIRST STAGE, NEVADA

Chairman HATFIELD. What is the status of the studies conducted to determine the operational problems with the large pumping units that were installed in pumping plants 1A and 2A under the first stage, southern Nevada water project? What steps are being taken to implement a solution to this problem?

Mr. BROADBENT. Field investigations were completed during 1980 for the two best alternatives for solving the problem. These alternatives were either to replace only the existing pump casings with stainless steel casings or to completely replace the existing pumps and motors. The results of these tests have shown that replacing only the pump casings with stainless steel casings will adequately solve the problem. This is also the least costly solution for this problem. The field investigation program was accomplished as a cooperative venture shared by the Bureau, the State of Nevada, and the original contractor that supplied the pumps.

A bill was introduced in the Senate during the first session of the 97th Congress by the Nevada congressional delegation to authorize replacement of the pump cases. The bill proposed that the cost of purchasing the pump casings be nonreimbursable and that the State of Nevada install the cases at its expense. The reason for the nonreimbursable portion is because the State of Nevada has incurred large expenditures to date for extraordinary maintenance and other costs associated with finding a solution for this problem. It is our understanding that a bill will also be introduced in the House during this session of the 97th Congress.

NEW DEFINITE PLAN REPORT, BRANTLEY PROJECT

Chairman HATFIELD. Why is a new definite plan report being prepared for the Brantley project?

Mr. BROADBENT. A new definite plan report is needed because the damsite of Brantley Dam has been moved about 2,000 feet downstream to utilize better foundation conditions. The new alinement resulted in a major change from that presented in the original report and a new definite plan report is being prepared to reflect this change.

CHIEF JOSEPH DAM PROJECT, OROVILLE-TONASKET UNIT, WASHINGTON

Chairman HATFIELD. We note that the total estimated cost for the Chief Joseph Dam, Oroville-Tonasket unit, exceeds the authorized ceiling. Please explain.

Mr. BROADBENT. The estimated Federal obligation for the Oroville-Tonasket unit is $71.9 million which exceeds the indexed authorized amount by $3,397,000. This is within the approximately $7 million contingency amount included in the total estimate.

Since only the first major contract has been awarded, the estimating data are not firm enough to determine if additional ceiling authorization will be necessary. This situation will be analyzed periodically as new and more precise data become available.

Block 26 Laterals

Chairman Hatfield. We see that you plan to initiate construction on the block 26 laterals, Columbia basin project. Congress first provided funds for this work in fiscal year 1980. Why has it taken so long for the work to get underway?

Mr. Broadbent. Funds were first provided in fiscal year 1980 to begin work on preconstruction activities. Since the initial system layout for this block was made, there has been considerable private development and we found it necessary to modify the previous plan. We also were required to reach accord with the irrigation district and various wildlife interests on an acceptable wildlife mitigation plan. Construction funds were first provided in fiscal year 1982, but budget constraints have delayed the contract award until fiscal year 1983. Completion is scheduled for the summer of fiscal year 1984.

Columbia Basin Project, Washington

Chairman Hatfield. Have you solved the problems associated with buying out towns as part of the downstream riverbank stabilization on the Columbia basin project? Please explain your plans for stabilizing the riverbank.

Mr. Broadbent. Yes; these problems have been resolved as there will be no need to buy out any towns. Our plans for stabilizing the riverbank call for primarily engineering solutions. There will be some right-of-way acquisition, but that will be relatively minor and will not involve relocation of total communities. The plan includes adding a bank line of armor riprap, resloping the banks, and installation of drainage wells and shafts to relieve water pressure in the riverbank.

Columbia Basin Project, Third Powerplant, Washington

Chairman Hatfield. A fire last summer caused extensive damage at the Columbia basin project's third powerplant. Will you please brief us on the present status of the facility? Was the cable still under warranty?

Mr. Broadbent. The fire on July 20, 1981, was in the high-voltage cables that carry power from the third powerplant generators to the switchyard area over a mile away. There are three cable circuits installed in each of two concrete tunnels. The fire was contained within one of the tunnels and, consequently, only half of the circuits were lost. The cause of the fire is under study by the Bureau and the cable manufacturer. Due to the uniqueness of these cables, in-kind replacement is expected to take several years. Temporary overhead circuits are being utilized until the damaged cables are replaced.

The total estimated cost of repair is $10 million, of which approximately $2.5 million has been spent for the temporary overhead lines. Emergency funds of $1.8 million were utilized to accelerate construction of the overhead lines.

The cable is under warranty and discussions are taking place with the manufacturer to replace the damaged cables.

Rehabilitation and Betterment

Chairman Hatfield. Describe the four new rehabilitation and betterment projects which will be started in fiscal year 1983.

Mr. Broadbent. The four new projects in the rehabilitation and betterment program in fiscal year 1983 are the Okanogan project; the Helena Valley unit of the Pick-Sloan Missouri basin program; the Strawberry Valley project; and the Yakima project, Granger Irrigation District.

The Okanogan project, Okanogan Irrigation District, is located in central Washington and was built before 1921. Facilities are obsolete, inefficient, and need replacement. Modification will be made to the headworks to reduce the intake of sand, concrete canal lining will be replaced, and the open lateral system will be replaced with a new pressure pipeline system. Rehabilitation work will be started in fiscal year 1983 on the pressure pipeline system.

On the Helena Valley unit, located in western Montana near Helena, construction of additional closed drains is required to provide adequate drainage of existing irrigable lands within the district. Many of the open drains require extensive maintenance activities such as cleaning and reshaping. Several miles of the earth laterals will be placed in either concrete lining or concrete pipe to improve the efficiency of water deliveries by reducing seepage. Rehabilitation work will be started in fiscal year 1983 on the installation of buried pipe drains and either lining laterals or replacing them with pipe.

The Strawberry Valley project is located in central Utah south of Provo. The Springville-Mapleton siphon was completed in 1918 and is in such poor condition that it could fail at any time. The structure must be replaced to assure continued water deliveries. Rehabilitation work will be initiated and completed on the siphon during fiscal year 1983.

The Granger Irrigation district is part of the Yakima project located in south-central Washington. The facilities on this district were constructed in the early 1900's and have deteriorated through normal use to the point that major repairs are required. Improvements to recognize technical advances in the conveyance and distribution of water will also be undertaken. This work would be initiated in fiscal year 1983 to assure continued service as well as to realize early returns on the more modern system. Work will be started in fiscal year 1983 on rehabilitation of siphons and canal repairs.

Funding for Safety of Dams Program

Chairman Hatfield. The budget request for the safety of dams program is $25.8 million. Briefly outline how the funds will be used and indicate the status of legislation raising the appropriation limit from $100 million to $450 million.

Mr. Broadbent. The 1983 safety of dams budget request of $25.8 million includes $19.2 million for safety of dams modification work on 11 dams continuing from 1982. Preparation of modification reports and advance specification design work will require $5.9 million. Also included is $0.7 million for coordination of the Department of the Interior dam safety program.

We appeared before the House Subcommittee on Water and Power Resources on January 26, 1982, in support of the proposed legislation to raise the appropriation ceiling and recommended several amendments. The amendments were: Eliminate the appropriation ceiling; provide authority to modify seven Reclamation projects dams not owned by the United States and not covered under the existing legislation; require cost sharing by project beneficiaries; provide for exemption of the modification report requirement when costs would be $500,000 or less; and provide for replacement of a dam rather than just modification when replacement is more economical.

Safety of Dams Program Results

Chairman Hatfield. What have been the results obtained to date under the safety of dams program?

Mr. Broadbent. Stage I construction work at Island Park Dam, Minidoka project, is complete. One construction contract for modification of Gibson Dam, Sun River project, is complete and a second contract for modification of the electrical and mechanical equipment at Gibson Dam has been awarded.

Modification reports, as required by the Reclamation Safety of Dams Act of 1978, are in various stages of completion for Willow Creek Dam, Sun River project, Montana; and Jackson Lake Dam, Minidoka project, Idaho. Final modification reports on Deerfield Dam, Rapid Valley project, South Dakota; Stony Gorge Dam, Orland project, California; Lahontan Dam, Newlands project, Nevada; Hyrum Dam, Hyrum project, Utah; and Lake Sherburne Dam, Milk River project, Montana, are under review.

The report on the modification of Guernsey Dam, North Platte project, Wyoming, has been completed and approved by Congress.

Final investigations are proceeding to determine the scope and necessity for safety modifications to Black Canyon Dam, Boise project, Idaho; Stewart Mountain, Bartlett, Horseshoe, Mormon Flat, Horse Mesa, and Theodore Roosevelt Dams, Salt River project, Arizona; East Park Dam, Orland project, California; and stage II construction at Island Park Dam.

It may be possible that our final analysis of these dams will find some of them safe, making modification unnecessary.

SAFETY OF DAMS

Chairman HATFIELD. The fiscal year 1983 budget justifications indicates that H.R. 3208 was introduced in the House of Representatives to amend the Reclamation Safety of Dams Act of 1978 by raising the appropriation limit from $100 million to $450 million. What is the need for this increase?

Mr. BROADBENT. The $100 million appropriation ceiling was based on 1978 cost estimates to modify 13 dams known at that time to need modification for safety purposes. Since that time, we have completed initial examinations of all our dams and have determined that 35 more dams may require modification to make them able to withstand the inflow design flood and/or the maximum credible earthquake. Other safety-related problems such as deteriorated concrete are also identified.

APPROPRIATION CEILING, SAFETY OF DAMS PROGRAM

Chairman HATFIELD. If the new appropriation ceiling in H.R. 3208 is not approved this year, what will be the impact on the safety of dams program?

Mr. BROADBENT. We expect that no new work commitments would be made after fiscal year 1983 without the increased appropriation ceiling.

Chairman HATFIELD. Will sufficient ceiling be available under the existing authority to complete any new work proposed for initiation in fiscal year 1983 along with work currently underway?

Mr. BROADBENT. No. Funding required to complete new work initiated in fiscal year 1983, along with the work currently underway, is $130 million, $30 million over the existing appropriation ceiling.

NORTH LOUP DIVISION, NEBRASKA

Chairman HATFIELD. This budget request shows that the estimated project cost of the North Loup division exceeds the appropriation ceiling by $20.7 million. Please explain this situation.

Mr. BROADBENT. The increase in the estimated project cost is due to design changes in Calamus Dam and involves changing the dam cross-section; increasing foundation treatment through use of a slurry trench; and adding internal drains to better accommodate seepage. These changes were incorporated for dam safety purposes and as a result of recommendations from a board of consultants.

The authorized appropriation ceiling and the project cost estimate both have been updated to October 1982 prices. The original authorized amount of $79.5 million has been indexed to the current appropriation ceiling of $231.4 million. The current comparable project cost estimate is $252.1 million and exceeds the appropriation ceiling by $20.7 million, or by 8.9 percent. The total amount of contingencies included in the project cost estimate is $31.2 million which exceeds the difference between the current estimate and the comparable indexed ceiling. Accordingly, this project is being observed closely by management to determine if additional authorization will be required to increase the appropriation ceiling.

The redesign of the first section of Mirdan Canal to include concrete lining also has resulted in cost increases. Estimated costs of other authorized project features appear to be adequate.

Our letter of February 10, 1981, to this committee and the other interested committees of Congress provides additional information in this regard.

P-SMBP, NORTH LOUP DIVISION

Chairman HATFIELD. Please explain the stages of construction on the North Loup division's Calamus Dam.

Mr. BROADBENT. The three stages are foundation, embankment, and instrumentation. Staged construction provides the best potential for thoroughly understanding conditions at the damsite, and designing the safest, most economical dam.

Based on preliminary drilling and investigations, a damsite is chosen. During stage I, excavation exposes the foundation so designers and geologists may examine it and decide on the best way to construct the embankment, which is stage II. Instruments are placed within the dam as it is built to monitor its performance and safety; and during stage III, data from these are analyzed and further instrumentation located as needed. In addition, drains and wells may be installed as needed.

In this manner, final designs need not be completed until all available information has been examined, and additional information can be gathered as required.

P-SMBP, O'NEILL UNIT, NEBRASKA

Chairman HATFIELD. What is the status of the O'Neill unit in Nebraska and how will the budget request of $700,000 be used?

Mr. BROADBENT. The unit is 2-percent complete. A bridge on the access road to Norden damsite was completed in November 1976. Since the March 4, 1977, injunction by the U.S. district court, only limited preconstruction work in compliance with that court order has been undertaken. Upon removal of the injunction, we will concentrate our fiscal year 1983 efforts to prepare specifications for the construction of Norden Dam and to improve the county road for access to Norden damsite leading toward early resumption of construction as directed by the Congress.

ALTERNATIVE PLANS FOR O'NEILL UNIT, NEBRASKA

Chairman HATFIELD. Last year, the House Appropriations Committee directed you to conduct a study of alternative plans for the O'Neill unit. Briefly describe your accomplishment in this regard.

Mr. BROADBENT. A 120-day study was done in accordance with the Nebraska House delegation's criteria, including liaison with certain Nebraska State agencies.

The specific alternatives evaluated were as follows:

1. Ainsworth-O'Neill combination.
2. Niobrara River diversion.
3. Downstream mainstem storage.
4. Carns pump diversion.
5. Mainstem Missouri River pump diversion:
    a. From Francis Case.
    b. Below Fort Randall Dam.
6. Artificial ground water recharge.
7. O'Neill unit increased ground water recharge.
8. Carns pump diversion with upstream storage.

The alternatives report was presented to the House delegation on October 13, 1981.

Although the report makes no recommendation, the project plan as authorized remains the most viable plan of providing a water supply for the O'Neill unit in the near future.

ANALYSIS OF GARRISON DIVERSION UNIT, NORTH DAKOTA

Chairman HATFIELD. In June 1978, Congress stated that it expected the Bureau to conduct an analysis of the Garrison diversion unit for the purpose of addressing the International Joint Commission recommendations. Have you completed your analysis?

Mr. BROADBENT. A final comprehensive supplementary environmental statement on the Garrison diversion unit, which contains our analysis relative to the International Joint Commission's recommendations, was filed with the Environmental Protection Agency on March 7, 1979. Copies were distributed to the appropriate congressional committees and members, other agencies, and the public on that same date.

If the court removes the stay on construction activities, we plan to construct a 5,000-acre irrigation test area in the West Oakes area to monitor the quality and quantity of return flows and to verify the quantity-quality predictions contained in the environmental statement and the report of the International Joint Commission. Other parameters to be monitored included best management practices, biota transfer, and wildlife impacts; all of which were recommended by the International Joint Commission. Research and testing of a fish screen to stop passage of undesirable fish species have been successfully accomplished through a laboratory and field testing program. The design, operation, and maintenance of the prototype fish screen have been successful to the point where feasibility designs of the modified fish screen structure have been made.

PHASED DEVELOPMENT FOR GARRISON DIVERSION UNIT, NORTH DAKOTA

Chairman HATFIELD. I understand the State of North Dakota has proposed a phased development plan for the Garrison diversion unit. What prompted this proposal and what are your reactions?

Mr. BROADBENT. In recent years, the Appropriations Committees in Congress have been sensitive to Canadian concerns and have directed that the use of funds be limited to features that will not adversely impact Canada. The project promoters in North Dakota also have been sensitive to Canadian concerns and have proposed a phased construction approach that would allow construction to go forward at this time on those features not affecting Canada. Primarily, the initial phase involves development in watersheds that do not flow to the Hudson Bay drainage system. Future construction would proceed in Hudson Bay drainages affecting Canada after sufficient investigation has been conducted to conclusively identify impacts and the requirements, if any, to mitigate those impacts agreed upon with Canada.

The phased development was presented to the Canadians during the consultation process. They have not taken an official position on the phased development proposal.

The phased approach is logical and will provide a mechanism to answer questions and provide solutions to potential problems.

NEGOTIATIONS WITH CANADA

Chairman HATFIELD. What is the status of negotiations with Canada relative to the Garrison diversion unit?

Mr. BROADBENT. Consultations with Canada have been underway for nearly a year. A technical briefing was held January 21, 22, 23, 1981, in Denver, Colo., between Canadian and United States officials to prepare for consultations between the two Governments. The initial consultation session between the two Governments was held on April 23, 1981, in Washington, D.C., wherein the position of the respective Governments were presented. The State of North Dakota proposed its phased development plan for construction of Garrison diversion unit. The second session was held October 29, 1981, in Ottawa, and the technical aspects of phased development were discussed in further detail.

The third round of Canadian consultations was held in Washington, D.C., on February 24, 1982, and the Canadians were informed that the United States is proceeding with phase I of the phased development plan. The United States explained the actions being taken to protect Canada and assured them that phase I of the Garrison diversion unit would not impact Canada. No official action was made by Canadian representatives.

It is anticipated that another consultation session will be held in the spring of 1982.

RESUMPTION OF CONSTRUCTION ACTIVITIES

Chairman HATFIELD. In light of the recent court order of January 28, 1982, what have you done to resume construction activities on the Garrison diversion unit?

Mr. BROADBENT. We have requested our Engineering and Research Center and the regional office to resume design work. We have recalled people from detail assignments and will begin force account drilling of observation wells in Oahe test area as soon as weather permits.

We will renew our land acquisition activities for the Oahe test area, New Rockford Canal, Lonetree Reservoir, and for fish and wildlife purposes. Efforts are continuing to develop a wildlife mitigation plan by September 1982 for the initial 85,000 acres.

Preparations will continue for the next session of consultations including review of a special report, "Garrison Extension, South Dakota," which considers extension of the project along the James River in South Dakota.

P-SMBP, OAHE UNIT, SOUTH DAKOTA

Chairman HATFIELD. What is the status of the legislation to deauthorize the Oahe unit?

Mr. BROADBENT. On July 16, 1981, Congressman Bedell of Iowa introduced H.R. 4172 calling for deauthorization of Oahe unit. The House of Representatives referred the bill to the Interior and Insular Affairs Committee, which has not yet taken action on it. Only routine security maintenance and real property management are scheduled in 1983.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS, TITLE I, ARIZONA-CALIFORNIA

Chairman **HATFIELD**. What is the status of the contracts for the membrane to be used in the title I desalting plant?

Mr. **BROADBENT**. Both contractors—Hydranautics and Fluid Systems—have completed the proof test requirements under the first phase of their contracts. Notice to proceed for furnishing the basic desalting equipment under schedule item No. 2 was issued to Hydranautics on July 7, 1981, and to Fluid Systems on December 14, 1981.

Proof test results on both contractors indicated that the equipment originally offered required additional capacity to assure design productivity during sustained operation on the Wellton-Mohawk drain water. Separate agreements were reached with the contractors and the Government which provide increased membrane area without additional plant construction or operating costs to the Government. Proof test results indicate that these modifications can provide the required productivity.

YUMA DESALTING PLANT SIZING

Chairman **HATFIELD**. Your status report dated November 1981 indicated you are reducing the size of the Yuma desalting plant from 96 million gallons per day to 73 million gallons per day. Why is this reduction being made?

Mr. **BROADBENT**. A thorough review of the Yuma desalting plant sizing was conducted in 1979 and 1980. That review concluded that the expansion of the on-farm irrigation efficiency improvement program could potentially reduce irrigation drainage levels sufficiently that they could be treated with a 73 million gallon desalting plant. Since the irrigation efficiency improvement program is very cost effective when compared with desalting capacity costs, it was decided to limit initial plant capacity to 73 million gallons per day. However, it should be noted that the desalting plant is being designed to the full 96 million gallon capacity to provide for future expansion, if necessary.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS, TITLE I, ARIZONA-CALIFORNIA

Chairman **HATFIELD**. What is being done to select and implement a plan to provide reject stream replacement water for the Colorado River basin salinity control projects, title I?

Mr. **BROADBENT**. A report on reject stream replacement studies was submitted to Congress in 1980. A total of eight alternatives were identified as possible replacement sources.

A plan for realinement and lining of a portion of the existing All-American Canal is considered to be the best alternative. A request for authority to conduct a feasibility study of this alternative is being prepared for submittal to Congress.

ADDITIONAL STUDIES ON PARADOX VALLEY UNIT

Chairman **HATFIELD**. You are showing a 2-year delay in the completion of the Paradox Valley unit due to the need for additional studies of brine disposal. Please explain which studies have been done and what additional studies you plan to do.

Mr. **BROADBENT**. The following studies have been made to find an economical way to dispose of the brine from the Paradox Valley: Geologic studies of project area, an evaporation pond study, and deep-well injection feasibility studies. At this point, we propose a thorough test of the deep-well injection method because there is potential that this technique will avoid much of the expense and environmental and social problems associated with the brine evaporation pond. This contract will be awarded in January 1983 and the results evaluated by December 1983.

APPROPRIATION CEILING FOR PARADOX VALLEY UNIT

Chairman **HATFIELD**. We note that the total estimated cost for the Paradox Valley unit exceeds the authorized ceiling. Please explain the reasons for the excess costs.

Mr. **BROADBENT**. This project was included as part of the work authorized by Public Law 93-320. The authorized ceiling covers Crystal Geyser, Grand Valley, Paradox

Valley, and Las Vegas wash units. The excess costs for the Paradox Valley unit's portion are primarily due to reanalysis of quantity and unit prices. Investigations revealed that portions of the reservoir basin had to be lined. In addition, a temporary camp and wildlife habitat loss mitigation were added to the original plan.

The total amount authorized to be appropriated for this unit and the Crystal Geyser, Grand Valley, and Las Vegas wash units is $303,945,288 using October 1982 prices. The estimate to construct these units is $425,477,288, which is greater than the authorized appropriation. The estimates indicate that additional appropriation ceiling will be required in order to complete construction. Legislation is being developed to increase the appropriation ceiling for the Paradox Valley unit.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS, GRAND VALLEY UNIT, COLORADO

Chairman HATFIELD. Last year you indicated that the plan for monitoring the effects of stage I construction was being implemented. What progress has been made with the monitoring program?

Mr. BROADBENT. Stage I construction is only partially complete. The Government Highline Canal of 6.8 miles has been lined with concrete but the laterals are not yet replaced by pipe.

The monitoring program was initiated a few months prior to completion of the lining to obtain data on prelining conditions. Data collection on post lining conditions has been in progress for about 7 months.

Monitoring will continue for 1 year after the lateral construction has been completed, or until 1984. After the monitoring program has been completed, the data collected will be analyzed in detail and the prelining and postlining salt loading effects will be compared to determine the salinity reduction in the Colorado River.

COLORADO RIVER BASIN SALINITY CONTROL PROJECTS, LAS VEGAS WASH UNIT, NEVADA

Chairman HATFIELD. Has the restudy of the Las Vegas wash unit, title II, formulated any alternative plans that may be more adaptable to present or future conditions in Las Vegas wash?

Mr. BROADBENT. Yes. Plans are being formulated for a verification program to demonstrate the effectiveness of bypassing good quality industrial cooling water and isolating localized highly saline ground water, thus preventing it from reaching the Las Vegas wash. This verification program would reduce the ground water flow in the Pittman, Nev., area by stopping the seepage from unlined ditches which carry low-salinity wastewater to the wash. This would be accomplished by replacing the unlined ditches with the Pittman bypass pipeline. The resulting reduced ground water flow may reduce the salt load entering the wash by 20,000 tons per year. Continued monitoring will provide data on the ground water response to the prevention of recharge in the Pittman area. The Pittman verification program should help demonstrate the potential effectiveness of additional ground water recharge control for Las Vegas wash. Such recharge control could be accomplished by construction of a bypass channel which would reduce the annual salt load to the Colorado River by 70,000 tons. The preparation of a definite plan for the bypass pipeline and related features requires further formulation of a comprehensive wastewater management plan endorsed by local water users.

CENTRAL UTAH PROJECT, UINTAH UNIT, UTAH

Chairman HATFIELD. Last year, on the Uintah unit, you indicated the definite plan report would be completed by fiscal year 1983. This year you are indicating the report will be due in fiscal year 1985. What is causing this delay?

Mr. BROADBENT. Completion of the definite plan report has been delayed to allow the Ute Indian Tribe sufficient time to complete an ongoing water and land resource investigation. A consultant has been retained by the tribe to study and to make recommendations for best use of the water resources available to the tribe.

DALLAS CREEK PROJECT, COLORADO

Chairman **HATFIELD**. Why has there been a large increase in the funding requirements for the Dallas Creek project between fiscal years 1982 and 1983?

Mr. **BROADBENT**. Excavation of the Ridgway Dam foundation under the stage I of the contract disclosed faulting and other unstable conditions, particularly in the left abutment. This necessitated changes in both structure and embankment design under stage II so that the completed dam would meet current dam safety criteria. The fiscal year 1983 funding increase would maintain the most efficient project completion schedule.

CHANGE IN PLAN FOR DALLAS CREEK PROJECT

Chairman **HATFIELD**. We understand that a change in plan has been made on the Dallas Creek project. What is the impact of the change?

Mr. **BROADBENT**. Under authority of Public Law 84–485, power development has been added to the plan through the addition of Ridgway Dam powerplant, 4,200 kilowatts, and its transmission line. The addition of power to the Dallas Creek project as a project purpose requires specific power facilities. The cost of these specific power facilities is the only additional project cost resulting from its inclusion as a purpose. In addition to the cost of the specific facilities, a share of the cost of joint-use facilities will also be allocated to power, thereby reducing the allocation to each of the other project purposes from what it would have been had power not been included.

The time required to construct the specific power facilities will be added to the existing schedules without a delay in ongoing work. If power produced were marketed through the Colorado River storage project system, both additional revenues and costs would be integrated into the Colorado River storage program system, this would repay with interest the costs allocated to power. If a non-Federal entity were to build the power facilities, it would have to pay the power function share of the project's costs.

The environmental consequences of power development at the project were analyzed, and found to be not significant, and a finding of no significance was approved on November 17, 1981.

REPAYMENT ON DALLAS CREEK PROJECT, COLORADO

Chairman **HATFIELD**. Does the Bureau anticipate delaying the issuance of stage II invitations for bid until project repayment is insured on the Dallas Creek project?

Mr. **BROADBENT**. No. Language contained in the fiscal year 1982 Senate Appropriations Committee report directed that, "Completion of construction on the Dallas Creek, Colo., project should not be interrupted or delayed by reason of problems in connection with the repayment contract for certain of its reimbursable costs." In keeping with these instructions, the bid opening on stage II will not be delayed due to repayment contract problems.

DOLORES PROJECT, COLORADO

Chairman **HATFIELD**. On the Dolores project, you have added power as a project feature. Please discuss the effect of the addition on cost, project completion, repayment, and environmental impacts of the project.

Mr. **BROADBENT**. Under authority of Public Law 84–485, power development has been added to the plan through the addition of McPhee Dam powerplant, 990 kilowatts, and Towaoc Canal powerplant, 10,500 kilowatts, and their respective power transmission lines. The incremental cost of adding specific power facilities would be the only additional costs to the project. These incremental costs would be assigned to the power purpose. In addition, a share of the cost of joint-use facilities would also be allocated to power thereby reducing the allocation to each of the other project purposes had power not been included. This will result in lower repayment for the other project purposes.

Construction schedules will not be delayed. The time required to construct the specific power facilities will be added to the existing schedule.

The environmental consequences of power development at the project were analyzed and found to be not significant, and a finding of no significant impact was approved on May 11, 1981.

CENTRAL UTAH PROJECT, BONNEVILLE UNIT, UTAH

Chairman HATFIELD. Will the authorization ceiling and repayment contract ceiling be increased prior to undertaking construction, the cost of which will exceed these cost ceilings?

Mr. BROADBENT. The authorization ceiling for Bonneville unit, Central Utah Project, is included with 4 units and 11 participating projects of the Colorado River storage project. The current cost exceeds the ceiling by less than 5 percent, which is less than the amount of contingencies included in the estimate. Prior to undertaking work which will exceed the appropriation ceiling, appropriate congressional committees will be advised and an increase in the ceiling will be requested. No work will be contracted which will cause the required repayment by the Central Utah Conservancy district to exceed the current repayment contract.

STATUS OF THE BONNEVILLE REPAYMENT CONTRACT

Chairman HATFIELD. What is the current status of the Bonneville repayment contract with regard to expenditures for municipal and industrial facilities?

Mr. BROADBENT. Use of the cost deferral provision of the Water Supply Act of 1958 has allowed construction to proceed under the provisions of the current repayment contract.

The 1964 repayment contract with the Central Utah Water Conservancy District provides for use of the Water Supply Act of 1958. The 1958 Act permits assigning a portion of the Bonneville unit's water supply for future M. & I. demands and deferring costs associated with that future water supply for future repayment. The Central Utah Water Conservancy District has agreed, by resolution, to the use of the provisions of the Water Supply Act to assign 60,000 acre-feet of water to future use and defer associated costs for future repayment. The district has agreed to eventually repay the deferred costs and contract for the full water supply under a supplemental repayment contract. Also, the district has agreed to contribute $10 million toward construction of Jordan aqueduct. As a result of the cost deferral, the repayment ceiling under the existing contract with the district is sufficient to continue construction activities.

While the use of the Water Supply Act and the district's contribution provides additional ceiling flexibility, they do not solve the entire repayment problem on the Bonneville unit. The 1964 contract also identified $38 million of nonspecific ad valorem tax revenues.

Approval has been given to apply these revenues to the M. & I. repayment obligation. It appears that while we will still have a problem, much of the Strawberry collection and Jordan aqueduct systems can be completed under the existing repayment contract. We anticipate that we will be working on a final solution to the problem throughout fiscal year 1983 with a supplemental repayment contract now scheduled for execution in late 1983.

UPPER STILLWATER DAMSITE

Chairman HATFIELD. On the Bonneville unit, what were the results of the roller-compacted concrete test section at the upper Stillwater damsite? Do you plan to build a roller-compacted dam there?

Mr. BROADBENT. Although testing remains to be completed, the system of facing elements intended to be used in the dam were demonstrated to be satisfactory and the method of concrete placement proved practical. Current testing is evaluating cleanup methods and concrete mix design. Minor changes can be expected as a result of this testing. Evaluation of the test section is expected to be completed by the end of 1982. We do intend to employ this engineering technique in the construction of the Upper Stillwater Dam.

CENTRAL UTAH PROJECT, JENSEN UNIT, UTAH

Chairman HATFIELD. We note that the total estimated cost for the Jensen unit exceeds the authorized ceiling. What are the reasons for the excess cost?

Mr. BROADBENT. This project was included as part of the total authorized by Public Law 92-370. The authorized ceiling covers 4 units and 11 participating projects of the Colorado River storage project. Major increases in the Jensen unit which caused the project to exceed its portion of the authorized ceiling are design changes necessary to accommodate site conditions and state-of-the-art criteria for dam safety during the construction of Red Fleet Dam; a rise in the total contract cost of the dam in excess of $28 million from the contractor's bid price of $12,792,430 and the addition of reach 2 of Tyzack aqueduct to meet a revised delivery point for municipal and industrial water customers. That portion of these costs attributed to state-of-the-art criteria for dam safety has been directed and authorized by Public Law 96-367.

CENTRAL UTAH PROJECT, UPALCO UNIT, UTAH

Chairman **HATFIELD**. We note that the total estimated cost for the Upalco unit, Central Utah Project, exceeds the authorized ceiling. What are the reasons for the excess cost?

Mr. **BROADBENT**. Major increases in the Upalco unit which cause the project to exceed its portion of the authorized ceiling are: Design changes necessary to incorporate site conditions of a relocated site for Taskeech Dam and current state-of-the-art criteria for dam safety, and a repricing of the original estimate to meet current economic and construction experience. This project was included as part of the total authorized cost ceiling by Public Law 92-370.

A contract has been executed with the Central Utah Water Conservancy District and two others are being negotiated for repayment of the reimbursable costs.

CONSTRUCTION ON UPALCO UNIT

Chairman **HATFIELD**. On the Upalco unit, when will construction actually begin?

Mr. **BROADBENT**. Right-of-way acquisition will be initiated in fiscal year 1984 as well as contract awards for the relocation of Moon Lake Road and construction of laboratory facilities. Relocation of power and telephone lines and award of the construction contracts for Taskeech Dam, Boneta diversion dam, and Taskeech feeder canal are scheduled for fiscal year 1985.

RECREATIONAL AND FISH AND WILDLIFE

Chairman **HATFIELD**. In connection with the recreation and fish and wildlife facilities program, describe the new project you are proposing in fiscal year 1983. What is the total estimated cost of the work proposed?

Mr. **BROADBENT**. The new item mentioned in the fiscal year 1983 budget justifications is for the Central Utah Project, Upalco unit fish and wildlife facilities. A fishery study will be initiated to determine the construction required to mitigate fishery losses caused by project construction.

The total estimated cost for the study is $487,000. The total estimated cost for recreational and fish and wildlife facilities on the Upalco unit includes ongoing work on a big game range and recreational facilities at Taskeech Dam. The cost is $9,299,000.

CENTRAL ARIZONA PROJECT, ARIZONA, CALIFORNIA, NEVADA, NEW MEXICO, AND UTAH

Chairman **HATFIELD**. Briefly describe the status of the Central Arizona Project, including the date of water delivery from the project.

Mr. **BROADBENT**. The project, including the Navajo project participating agreement, is 35 percent complete. Work is complete on Havasu intake channel dike; Havasu pumping plant site excavation and plant structures; three tunnels and seven siphons of the Granite Reef aqueduct; Granite Reef aqueduct reaches 2, 3, 5A, 6, 7, 8, 9, 10, and 11; the Davis-Parker 230-kV transmission line; Davis-Parker switchyards 230-kV additions; Liberty-Parker 230-kV transmission line; and Liberty substation 230-kV additions. Land acquisition is complete for the Granite Reef aqueduct and associated transmission lines. Final environmental impact statements have been completed for the overall Central Arizona Project, the Havasu pumping plant and Buckskin Mountains tunnel, Granite Reef aqueduct, Granite Reef aqueduct transmission system, and the Salt-Gila aqueduct.

Water from the Central Arizona Project will be delivered to Phoenix and Pinal County in 1985, to Pima County in 1987, and to Tucson in 1988.

CENTRAL ARIZONA PROJECT WATER ALLOCATIONS

Chairman **HATFIELD**. What is the status of Central Arizona Project water allocations?

Mr. **BROADBENT**. The Secretary of the Interior has directed that, for the purposes of finalizing the environmental impact statement and other planning considerations, Central Arizona Project water allocations to Indian users shall be in accordance with the water service contracts executed in December 1980 with the Indian entities. In addition, 173,100 acre-feet per year are proposed to be allocated to the Gila River Indian Tribe should the tribe execute a water service contract for that amount.

For the Bureau's environmental impact statements and other planning considerations, the Secretary has also directed that State priorities for allocation to non-Indian users be considered as the proposed water allocation.

The Arizona Department of Water Resources is actively engaged in developing the State's current recommendations.

WORK SCHEDULED FOR 1983 ON CENTRAL ARIZONA PROJECT

Chairman **HATFIELD**. What work is scheduled for fiscal year 1983 on the Central Arizona Project?

Mr. **BROADBENT**. In fiscal year 1983, construction will be initiated on the check structure completions for Granite Reef reaches 1 through 5B; Salt-Gila aqueduct reaches 1B, 2, and 4: the check structure completions on Salt-Gila aqueduct; the Salt River siphon-scour control structure; Tucson pumping plant No. 2; pumps, motors, and valves for Tucson pumping plant No. 2; and an uninterruptible power supply for the project headquarters complex. Construction of the McCullough-Davis 230-kV transmission line, Spook Hill Salt-Gila pumping plant 69-kV transmission line, and the Spook Hill substation will be initiated by the Department of Energy. Land acquisition will be initiated on Tucson aqueduct reach 2.

Work will continue on the Havasu, Bouse Hills, Little Harquahala, Hassayampa, and Salt-Gila pumping plants; the check structure completions for Granite Reef reaches 6 through 12; Granite Reef reaches 1 and 4; Salt-Gila aqueduct reaches 1A; and the supervisory control system.

Construction on Granite Reef reach 5B, security fencing on Granite Reef reach 12, and Salt-Gila reach 3, project headquarters complex, and maintenance warehouse and shop building will be completed.

The final environmental impact statement for regulatory storage division and a draft environmental impact statement for Tucson aqueduct, phase B will be filed.

NON-INDIAN DISTRIBUTION SYSTEM OF CENTRAL ARIZONA

Chairman **HATFIELD**. What is the status of the $2 million authorized and appropriated under the Energy and Water Development Appropriation Act, 1982, for processing qualified loan applications for the distribution systems?

Mr. **BROADBENT**. We have processed and will continue to process loan applications to the Commissioner's office. However, since none of the applications have been approved by the Secretary, we do not have a loan on which we could use the $2 million as directed by Public Law 97–88. Some of the $2 million has been used for preliminary work involving limited land classification, conducting negotiations between Indian and non-Indian irrigation districts for the purpose of developing more efficient water delivery systems, and processing loan applications.

LOWER TETON DIVISION, TETON BASIN PROJECT, IDAHO

Chairman **HATFIELD**. We note the Lower Teton division has been dropped from the construction program and is now being funded through the operation and maintenance budget. Will you please explain this change?

Mr. **BROADBENT**. The method of funding the Teton work has been changed since it now appears that all of the investigative and salvage work will be completed in fiscal year 1982 with the only remaining activities being of a caretaker nature. We still must administer the Government land holdings, provide for public safety at the site, and meet fish and wildlife mitigation commitments. These expenses are expected to continue into the foreseeable future and have, accordingly, been included with the Minidoka area projects' O. & M. budget since the work is being administered by that office.

TETON DAM DISASTER ASSISTANCE ACT CLAIMS PROGRAM

Chairman **HATFIELD**. What is the status of claims filed under the Teton Dam claims program?

Mr. Broadbent. A total of $400 million has been appropriated for the Teton claims program. As of January 31, 1982, we had paid more than $321.8 million to 7,556 claimants. A total of 7,545 claimants have received final payments totaling more than $311.9 million, and partial payments totaling over $9.9 million have been paid to 11 claimants, but $11 million remains unobligated pending final settlement for the 11 claimants. A total of approximately $25.9 million for six claimants is being processed; and remains unobligated. A total of 298 claims in the amount of $80 million have been denied; and 24 claims, totaling a little over $1 million, have been withdrawn. Administrative costs in the amount of $7 million have been incurred.

From the $400 million originally appropriated for this program, Public Law 95-629 withdrew $10,125,000 for completion of projects under the adjustment program for the Teton disaster area, of which $307,000 remains unspent; Public Law 96-69 withdrew $19.2 million for reimbursement of American Falls Dam reconstruction costs; Public Law 97-88 withdrew $2 million for the Central Valley project, San Luis unit asbestos fiber program; $7 million has been reallocated for slide repairs on the San Luis Dam, Central Valley project; and $4 million is being proposed for transfer to the Middle Rio Grande project to repair the San Acacia Elephant Butte low-flow conveyance channel.

The unobligated balance for the claims program, taking into consideration the above actual and proposed funding adjustments, is $29.2 million.

Change in Operation and Maintenance Fund Requirements

Chairman Hatfield. The operation and maintenance appropriation in fiscal year 1982 was $118.5 million and you are asking for $140.9 million in fiscal year 1983, an increase of $22.4 million. Why is the increase needed and how will it be used?

Mr. Broadbent. As you may recall, in fiscal year 1981 the Congress cut our budget request by $13 million which resulted in deferring several of our program activities. In fiscal year 1982, our budget request was cut by $17.6 million to help reduce Government spending. The impact of these cuts caused us to further defer our scheduled O. & M. program. Thus, we have been unable to replace worn-out plant facilities and equipment and to perform some badly needed maintenance.

We will use $3 million of the increase on the North Platte area of the Pick-Sloan Missouri basin program primarily for completion of Casper Power Control Center and for replacement items deferred from previous years; $2.5 million for the Yuma area projects for levee riprap protection on the Colorado River levee below Lake Mead; $2.4 million will be used on the Boulder Canyon project to continue plant modernization and power uprating programs; $2.3 million will be used on the Pick-sloan Missouri basin program, upper Missouri area, primarily for an emergency cable bypass system at Yellowtail Dam and for replacement and additions previously deferred; $1.7 million for the examination of existing structures program for preparation of inundation maps and for strong motion earthquake instrumentation; $1.6 million for soil and moisture conservation activities throughout the 17 Western States, including erosion control, revetment work, noxious weed control, and revegetation around our canals and reservoirs; $1.5 million for the Solano project for completion of an administration warehouse complex at Lake Berryessa; $1.5 million, primarily for the middle Rio Grande project to continue restoration of a low-flow conveyance channel near the Rio Grande River; $1.5 million on the Central Valley project, primarily for replacement or repairs to powerplant equipment at Tracy and Folsom powerplants and for generator rewinds at the Tracy and J. F. Carr powerplants; and $1.3 million for the Columbia Basin project, primarily to continue replacement of main unit transformers and station service turbine runners. The 10 projects mentioned will receive about $19.4 million of the increase and the balance of $3 million will be used on the remaining projects or programs primarily on work deferred from previous years.

Operation and Maintenance—New Facilities Coming Into Operation

Chairman Hatfield. What new facilities will be coming into operation in fiscal year 1983 and what are their estimated operation and maintenance costs?

Mr. Broadbent. The new facilities coming into service for the first time affect seven projects. A tabulation will be furnished for the record.

[The information follows:]

Project	O. & M. costs
Boise area projects, Idaho-Oregon: Hydromet system	$20,000
Columbia basin project, Washington: Pump generator units 9 through 12 and a programmable master supervisory control system	325,000
Crooked River project, Oregon: Hydromet system	4,000
Minidoka project, Idaho-Wyoming:	
Hydromet system	32,000
Teton project mitigation costs	125,000
Central Valley project, California: Reach 8 of the Tehama-Colusa Canal	213,000
Upper Missouri area, Montana-Wyoming: Canyon Ferry conservation and wildlife enhancement facilities	100,000
Total	819,000

BOULDER CANYON PROJECT, ARIZONA-NEVADA

Chairman HATFIELD. What is the status of the Boulder Canyon project's uprating program and when will you realize the uprated benefits of the Hoover powerplant?

Mr. BROADBENT. As of February 1, 1982, work has been initiated on only 2 of the 17 generators at Hoover Dam. The contractor has installed the new stator coils in unit A-5 and is awaiting return of the rewound rotor coils for replacement. With the exception of the rewinding and reinstalling the rotor coils, they have fabricated and supplied 99 percent of the requirement on unit A-5 and have supplied 50 percent of the materials and equipment on unit N-7. Generating unit N-7 is scheduled to be back in service by May 1983 at its uprated capacity of 127 megawatts. Generating unit A-5 is scheduled to be returned to service by May 1982. It will, however, require the purchase of a higher rated transformer to realize the uprated capacity. Delivery and installation of the transformer are scheduled to make additional capacity available by December 1983. At that time, the full uprated capacity of 127 megawatts will be realized from each generator. This will be an increase of 44.5 megawatts each from the present 82.5-megawatt nameplate capacity.

YUMA AREA PROJECTS—CONSOLIDATED, ARIZONA-CALIFORNIA

Chairman HATFIELD. Are the levees on the Yuma area projects—consolidated capable of conveying the levee design floods?

Mr. BROADBENT. No; levees on the Colorado River front work and levee system of the lower Colorado River in their existing condition will not carry the design floodflows for a sustained period without receiving major damage or being breached. There are about 92 miles of unprotected levees between Davis Dam and the southerly international boundary. The levee design floods vary from 50,000 cubic feet per second beginning below Davis Dam to 140,000 cubic feet per second at Yuma, Ariz. Funds to initiate the levee protection program were appropriated in fiscal year 1982 and are scheduled over a 5-year period for riprapping the existing levees at an estimated total cost of $40 million. The estimate does not include the cost of channel dredging, floodway clearing, and/or levee modifications which recent studies indicate may be required to insure passage of design floodflows in some specific reaches of the river.

TURNOVER OF PROJECT FACILITIES—YUMA AREA

Chairman HATFIELD. What is the status of the turnover of project facilities to the water users in the consolidated projects of the Yuma area?

Mr. BROADBENT. The turnover of project facilities within the Yuma area to the water users is progressing as follows:

One. Imperial and Laguna Dams, Boulder Canyon project—A draft contract for the turnover of these facilities to Imperial Irrigation District has been reviewed by the Imperial Irrigation District and has been submitted to all other water users for their review and concurrence. It is proposed to have the contract finalized and turnover completed by May 1, 1982.

Two. Gila gravity main canal, Gila project—The contract has been revised and resubmitted to the five irrigation districts receiving water from the canal. It is proposed to have the contract finalized and completed no later than May 1, 1982.

Three. Reservation division, Yuma project—The Bard unit was turned over to the Bard Water District on April 4, 1981. Negotiations are underway to turn over the operation and maintenance of the Indian unit to the Bard Water District. An operating agreement is scheduled for execution by the end of this fiscal year.

CENTRAL VALLEY PROJECT, NEW MELONES UNIT, CALIFORNIA

Chairman HATFIELD. What is the current status of the filling of New Melones Reservoir?

Mr. BROADBENT. In 1981, below normal runoff prevented any progress in filling. This year the reservoir was filling rapidly when on February 2, 1982, the Ninth Circuit Court of Appeals issued an injunction limiting the storage level to elevation 844 feet, except for flood control operations, until the court makes a final determination in the case *United States* v. *California*. The injunction required us to provide the State with an operating plan to comply with the court order.

Our operating plan is based on releasing a maximum of 1,250 cubic feet per second from New Melones as long as the level exceeds 844 feet. Our studies have found that to be the maximum sustained release that will not raise the ground water level enough to cause agricultural damage to croplands adjacent to the Stanislaus River. High runoff and flood conditions in California in February 1982 have necessitated flood control operations at New Melones, with the result that the reservoir storage as of February 24 was 701,600 acre-feet, elevation 896.3 feet, and still rising slowly. Full storage level is 2,400,000 acre-feet. Under our operating plan and given the above normal runoff this year, we will not be able to draw the reservoir down to elevation 844 feet until the summer of 1983.

All of the historical and archeological mitigation field work has been completed and will no longer affect reservoir operations.

MIDDLE RIO GRANDE PROJECT, NEW MEXICO

Chairman HATFIELD. I understand there is a problem on the middle Rio Grande below Albuquerque, N. Mex. What is the problem and what corrective action is being taken?

Mr. BROADBENT. The problem is that the low-flow conveyance channel is presently inoperable due to several years of sediment accumulation and deterioration of channel side slopes. During high flows and medium levels at Elephant Butte Reservoir in 1975, a sediment plug developed in the narrows of Elephant Butte Reservoir.

The corrective action being taken is to restore the channel in three segments. The first segment includes approximately 7 miles of channel in the upper portion of the valley and is scheduled to be completed by May 1, 1982, before spring runoff. The second segment will be initiated after spring runoff and will involve approximately 13 miles of restoration in the middle portion. The third segment, which will be accomplished in fiscal year 1983, will involve approximately 15 miles of channel restoration in the lower portion of the valley and approximately 5 miles through the narrows above Elephant Butte Reservoir.

The low-flow conveyance channel was originally designed to salvage water and transport salvaged water through the lower portion of the middle Rio Grande Valley and into the normal pool of Elephant Butte Reservoir. Water salvage continues to be of great importance due to New Mexico's obligation to Texas under the terms of the Rio Grande Compact.

Since the Rio Grande Compact in 1940, New Mexico had experienced a rise in debt to the compact. During the period from 1959 to 1975, when the conveyance channel was in relatively full operation, the debt to the compact was reduced. However, since 1975, the debt has continued to rise which coincides with the deterioration of the conveyance channel.

ACREAGE LIMITATION

Chairman HATFIELD. What is the Department's position with respect to acreage limitation?

Mr. BROADBENT. The Department supports a legislative solution to update reclamation law to reflect modern farming practices and today's economic conditions.

We support new legislation which would expand the eligible acreage which can receive project water from 160 acres to 960 acres. The residency provision should be repealed. Corps of Engineers' projects should be exempt from application of reclamation laws unless they are designated by statute to be a part of a reclamation project.

We support special exceptions and exemptions from acreage limitations and other provisions of reclamation law which might prohibit delivery of irrigation water, such as districts which have completed repayment of contract obligation, charitable organizations, a fiduciary for a beneficiary whose interests do not exceed the acreage limitations, land using temporary water supplies, lands acquired by involuntary foreclosure, isolated tracts, and lands served with a temporary supply which may later be withdrawn for municipal and industrial purposes.

We support delivery of irrigation water to landholdings of unlimited size if the land in excess of 960 acres is operated under lease and full cost is paid for water delivered. Farm operators currently in compliance with the 1902 Act should receive a limited grandfather provision allowing for continuation of subsidized water for the term of their lease not exceed 10 years. The same applies to valid recordable contracts until their expiration.

We support application of equivalency but would limit its use to those districts where a majority of the irrigable land has a frost-free growing season of 180 days or less based on records published by the Department of Commerce.

The court order requiring the Secretary of the Interior to publish rules and regulations dealing with acreage limitation continues in effect. We would prefer to prepare such rules on new legislation that Congress may enact. However, if Congress does not act promptly, we will proceed to prepare and publish rules based on existing law.

SAFETY EVALUATION OF EXISTING DAMS

Chairman HATFIELD. What work has been accomplished on the safety evaluation of existing dams program?

Mr. BROADBENT. An initial safety evaluation of existing dams examination has been conducted on all of the dams for which we have responsibility and 60 dams have been reinspected. Since our dams also are inspected periodically under the review of operations and maintenance program, it is our policy to coordinate and combine these examinations to conserve resources. Modification decision analysis work, seepage investigations, core drilling, materials sampling, and laboratory testing have been completed or are currently underway for 80 of our dams.

EXAMINATION OF EXISTING STRUCTURES PROGRAM

Chairman HATFIELD. Please explain your proposal to use Upper Colorado River storage project revenues for the examination of existing structures program in fiscal year 1983?

Mr. BROADBENT. In fiscal year 1983, Upper Colorado River storage project revenues will be used to fund examination of existing structures program safety of dams examinations at storage project dams. The safety of dams work will include data analysis and evaluation, inundation mapping, installation of performance monitoring instrumentation, and the preparation of safety of dams reports. In previous years, that work was funded under the operation and maintenance appropriation; however, the beneficiaries of the work are in the Upper Colorado River basin States, and we believe that it is appropriate that the work be funded from Upper Colorado River storage project revenues.

The funding request from storage project revenues is $1 million in fiscal year 1983. The request for funds from the operation and maintenance appropriations for the remainder of our examination of existing structures program is $7.2 million.

WEATHER MODIFICATION

Chairman HATFIELD. I understand you are proposing a Colorado River augmentation demonstration program. Why is it necessary to demonstrate weather modification? Would this investment be better spent by contracting with private industry to perform operational cloud seeding in the Colorado River basin?

Mr. BROADBENT. Weather modification must be demonstrated as an effective technology before it can be used operationally. Research to date has provided promising indications that cloud seeding can be highly effective in augmenting water supplies, but we need to insure that it is economically justified and socially acceptable. Also, we need to quantify seeding effects as precisely as possible to help settle questions of water rights and Federal responsibilities.

Simply hiring a contractor to seed clouds will not tell us what we need to know about the magnitude of effect, whether effects exist outside the target area and if the technology can be used safely and consistently for augmenting the Colorado River. Making those determinations will require highly calibrated equipment and a dense data gathering network deployed over mountainous terrain. We plan to draw heavily on the resources and talents of private industry, and academic institutions, as well as Federal agencies in this effort.

COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

Chairman HATFIELD. Does the Bureau have the authority to raise power rates to pay for Colorado River augmentation demonstration program?

Mr. BROADBENT. Subject to the will of the Congress in approving the budget amendment for the accelerated demonstration program, the Bureau can raise the power rates charged at its Colorado River generation facilities. Since the demonstration program is directed toward the development of techniques which can enhance the operational effectiveness of the entire Colorado River system, provide water resources to Mexico in accordance with treaty obligations, and enhance water quantity and quality in the entire basin, we believe it is correctly an operations and maintenance function. This proposal appears to be the most appropriate means of carrying out the Secretary's responsibilities under the Colorado River Basin Project Act and is in keeping with the administration's policy of cost sharing for new water projects.

FINANCING THE COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

Chairman HATFIELD. How do you propose to fund the Colorado River augmentation demonstration program?

Mr. BROADBENT. This program would require approximately $30 million for the first 3-year phase of project design, field site preparation, and equipment procurement, while the following 5-year demonstration phase would require about $7.7 million per year for a total of $68.4 million.

We are requesting an amendment to the operation and maintenance program for fiscal year 1983 to increase our obligations by $11 million and funding the increase from revenues. Based on an expected 12 billion kilowatt-hours of hydropower generated by the Bureau's Colorado River facilities, a five-sixths of a mill per kilowatt-hour levy would finance the first phase while five-eighths of a mill would finance the demonstration project. During the demonstration phases, we expect to generate an additional 1 million acre-feet of new water in the Upper Colorado basin.

We propose to levy a uniform surcharge on all hydropower generated by the Colorado system. Power revenues for operation and maintenance are collected by three funds: Colorado River storage project revenues are deposited in the Upper Colorado River basin fund; Hoover Dam revenues in the Colorado River Dam fund; and Parker-Davis Dam revenues in the reclamation fund. We believe it is appropriate to increase the power rates uniformly for these three projects to support the demonstration program because all three will benefit from new water resources.

Through years of research in the field of wintertime orographic cloud seeding, the Bureau has invested approximately $56 million in general investigations funds for feasibility studies and technique development. We are now ready to demonstrate an operational technology for the benefit of a specific area, the Colorado River basin. The adjusted operations and maintenance charges we propose provide an equitable means of financing through a nominal increase in power rates.

In line with the administration's water resources policy of cost sharing and the beneficiary pay principle, we believe it is appropriate that the financing for the application of this technology come from those regions which will benefit. Ultimately, this investment in the demonstration program will bear several important benefits, including increased hydropower generation at a small fraction of the cost of alternative sources of energy.

STATUS OF LOAN PROGRAMS

Chairman HATFIELD. What is the current status of the loan program?

Mr. BROADBENT. The Secretary of the Interior is in favor of the goals of the loan program, but the nationwide economic situation has not permitted approval of any new loan applications. Funds for 10 ongoing loan projects are requested in our 1983 budget.

In connection with new loan projects, we feel there is a good possibility for non-Federal financing on those relatively small projects. While pursuing the possibilities of non-Federal financing, we are working with the local entities on schedules for completing distribution systems so they will be available at the time water deliveries can be made.

PENDING LOAN APPLICATIONS

Chairman HATFIELD. Since no new loans are proposed for fiscal year 1983, what is your backlog of pending applications?

Mr. BROADBENT. The backlog of pending applications is about $798 million, which represents 39 applications.

CENTRAL ARIZONA PROJECT, DISTRIBUTION SYSTEMS, ARIZONA

Chairman HATFIELD. What problems exist which are associated with the administration of the Central Arizona Project distribution systems loan program that could be addressed by legislative action?

Mr. BROADBENT. The enabling legislation authorizes $100 million for construction of non-Indian distribution systems. Approximately $550 million will actually be required in order to accomplish construction of all the distribution systems for which we have either loan applications or expressions of intent.

The distribution system loan applicants are using their total ability to pay for water in order to retire their proposed loans. Even so, some districts may not qualify under current criteria for loans. They desire to include existing wells as a part of the project and as a contribution to improve their subsidy factor.

The enabling legislation could be amended to increase the ceiling from $100 million to $550 million and allow indexing and authorize integration of existing wells as a project purpose.

AK-CHIN INDIAN COMMUNITY (EAST), ARIZONA

Chairman HATFIELD. What is the status of the loan application for Ak-Chin Indian community?

Mr. BROADBENT. Review of the final loan application report and environmental documents has been completed. The Secretary of the Interior has approved the application and forwarded it to the Congress for authorization on February 22, 1982. Since the fiscal year 1983 budget request did not include funds for this loan, funding will have to be requested through a fiscal year 1983 budget amendment.

The proposed project includes construction of pipeline laterals, sublaterals, drains, farm roads, enlargement of operation and maintenance facilities, and construction of an office building. The required loan amount is $12,291,500. The proposed project will allow the Ak-Chin Indian community to utilize the water guaranteed by the Ak-Chin Indian Water Rights Settlement Act, Public Law 95-328.

LOAN PROGRAM—CONSTRUCTION COST INCREASES

Chairman HATFIELD. You are requesting $3 million for construction cost increases; how will this be used? Do you know of any projects that may need this in fiscal year 1983?

Mr. BROADBENT. The requested cost escalation funds will be used to meet the increased needs of three projects. The projects are Gila River Farms in Arizona, $2,088,000; Hidalgo County Water Improvement District No. 5 in Texas, $400,000; and De Luz Heights Municipal Water District in California, $512,000.

COMPLETION OF LOAN PROJECTS

Chairman HATFIELD. How many loans will be completed in 1982 and how many will be completed in 1983?

Mr. BROADBENT. Six loans will be completed in 1982. They are: Cooney Dam rehabilitation in Montana; Cameron County Water Control and Improvement District No. 19 in Texas; Rainbow Municipal Water District in California; Roy Water Conservancy Subdistrict supplemental in Utah; Santa Maria Water Control and Improvement District in Texas; and the Santa Weber Water Improvement District supplemental in Utah.

Three loans will be completed in 1983. They are: Garland Canal power project in Wyoming; Glenn-Colusa Irrigation District; and the Rainbow Municipal District-Improvement District No. 6 in California.

GENERAL ADMINISTRATIVE EXPENSES

Chairman HATFIELD. Please explain why the 1983 general administrative expenses appropriation increased from $39,928,000 for 1982 to $49,300,000 for 1983.

Mr. BROADBENT. The total increase is $9,372,000. Of this increase, $300,000 is due to incremental costs resulting from periodic salary increases and related benefits, $1.1 million to cover increased costs of office space, materials, supplies, and contractual services, $4.5 million for acquisition of the first of a 3-stage replacement of the obsolete central computer system, and $3,472,000 for purchase of equipment and for contract work postponed during fiscal year 1982.

CENTRAL COMPUTER SYSTEM REPLACEMENT

Chairman HATFIELD. You are requesting $4.5 million for the first of a three-stage replacement of your central computer system. What is the total cost of the new system?

Mr. BROADBENT. The total cost is $17.1 million over 3 years. In addition to the $4.5 million first phase requested for fiscal year 1983, payments of $6.3 million will be requested in fiscal years 1984 and 1985.

NEED FOR COMPUTER SYSTEM REPLACEMENT

Chairman HATFIELD. Why is a new computer system needed and what would be the impact if replacement of the existing system were postponed?

Mr. BROADBENT. The Bureau implemented a centralized computer system serving all general-purpose data processing requirements in 1974. This was undertaken with a 5-year contract with Control Data Corp. and involved operation of a large-scale computer in Denver, Colo., and remote terminal equipment in field offices throughout the Bureau. The central site equipment consists of two CYBER 170-730 systems whose capacity will be insufficient to meet the Bureau's needs beyond 1983 and, in fact, will have to be augmented to insure that sufficient ADP support exists during the replacement phase. The small computers and remote job entry terminals installed in major field offices since 1974-76 are obsolete, hard to maintain, and of insufficient capacity for local requirements for the 1980's.

A delay in replacement of the computer system would result in the Bureau's inability to meet its short-term, rapidly growing data processing needs. Bureau programs that rely on ADP support include design, construction, research, planning, operation and maintenance, and administrative functions. A delay in replacement would thus have an adverse impact upon mission accomplishment.

Another adverse result from any lengthy delay or cancellations will be the gradual, uncontrollable, and/or unavoidable proliferation of a wide variety of incompatible computing systems. Such uncoordinated procurements of systems would occur as a result of attempts to satisfy specific data processing problems on a piecemeal basis and would likely lead to serious technical problems and cost inefficiencies on a bureauwide basis.

Some of the equipment in the regional and field offices has reached the point where it is no longer maintainable and will have to be replaced. Other equipment is becoming increasingly obsolete to the point where maintenance will no longer be efficient and any presumed savings from delaying replacement would be lost.

As Reclamation's data processing needs increase, and if replacement is postponed, arrangements to provide ADP services, including payroll, to other Interior bureaus would have to be reconsidered, including termination of such services. Those bureaus would then be faced with obtaining needed ADP systems through separate arrangements.

SUBCOMMITTEE RECESS

Chairman HATFIELD. Again I express my deep appreciation for your willingness to rearrange your schedule, which is a very difficult one, I know.

Thank you.

The next meeting will be held on March 23 at 2 p.m.

[Whereupon, at 3:20 p.m. Tuesday, March 16, the subcommittee was recessed to reconvene at 2 p.m. Tuesday, March 23.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

TUESDAY, MARCH 23, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS
Washington, D.C.

The committee met at 2:03 p.m. in room S-128, the Capitol, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Mattingly, and Sasser.

TENNESSEE VALLEY AUTHORITY

STATEMENT OF CHARLES H. DEAN, JR., CHAIRMAN

ACCOMPANIED BY:
- S. DAVID FREEMAN, DIRECTOR
- RICHARD M. FREEMAN, DIRECTOR
- WILLIAM F. WILLIS, GENERAL MANAGER
- JOHN G. STEWART, ASSISTANT GENERAL MANAGER
- BILLY J. BOND, MANAGER OF AGRICULTURAL AND CHEMICAL DEVELOPMENT
- GEORGE H. KIMMONS, MANAGER OF ENGINEERING DESIGN AND CONSTRUCTION
- RICHARD L. MORGAN, JR., MANAGER OF ECONOMIC AND COMMUNITY DEVELOPMENT
- HUGH G. PARRIS, MANAGER OF POWER
- HERBERT S. SANGER, JR., GENERAL COUNSEL
- J. FREDERICK WEINHOLD, PROGRAM MANAGER, COAL GASIFICATION PROJECT
- GAIL H. SINGH, CHIEF, BUDGET STAFF

SUBCOMMITTEE PROCEDURE

Chairman HATFIELD. The hearing will come to order.

This afternoon, we will receive testimony on the fiscal year 1983 budget request for the Tennessee Valley Authority. As our principal witness, we welcome, for the first time before this committee, Mr. Charles H. Dean, Jr., Chairman of the Tennessee Valley Authority. We are also pleased to have with us again the other two Directors of the TVA board, Mr. S. David Freeman and Mr. Richard M. Freeman.

PREPARED STATEMENT

Chairman Dean, we look forward to your overview of the budget request and we will put your full testimony in the record. You may proceed to summarize or highlight it as you wish.

[The statement follows:]

STATEMENT OF CHARLES H. DEAN, JR.

Mr. Chairman and members of the subcommittee, I am pleased to be here today to outline the Reagan administration's request of $119.5 million for the Tennessee Valley Authority in fiscal year 1983.

TVA recognizes the need for budgetary stringency in these difficult economic times. Mr. Chairman, in its fiscal year 1983 budget program TVA is striving to manage each dollar with the greatest frugality, yet balance that with concern for the well-being of the 8 million people in the Tennessee Valley.

This budget program reflects TVA's guiding philosophy of helping those communities and individuals within the Tennessee Valley who are willing to try to help themselves. TVA believes that the fundamental resources needed for the economic development of the valley—land, water, energy, people, and commitment—are present. TVA can help put these resources more fully to work by sharing with the States, counties, communities, private industries, and citizens the skills and capabilities it has developed over the years in meeting its statutory obligations.

By following the precept of helping those who are willing to try to help themselves, TVA can see its resources achieve the kind of direct visible results that build on the region's strengths. Moreover, TVA programs that have achieved their objectives are routinely phased out or transferred to others for implementation.

This is in keeping with TVA's goal of helping strengthen private enterprise and State and local governments throughout the Tennessee Valley area. In many instances, the valley's achievements, supported by TVA, are equally beneficial to the Nation as a whole.

The implementation of TVA's statutory responsibilities has resulted in the acquisition of tremendous physical resources—land, buildings, locks and dams, generating stations, roads, recreation facilities, laboratories, and other real property. TVA's programs are directed at the proper maintenance and use of these resources. All of this property—especially the land—is regarded by TVA as an asset of the American people entrusted to TVA for proper care and use. This philosophy of stewardship—combined with TVA's unique range of capabilities and knowledge—makes possible an approach that fully uses these resources for the benefit of the valley and the Nation today while preserving and enhancing their value to future generations.

NATURAL RESOURCES

Since 1933, TVA has had a statutory stewardship responsibility for constructing, operating, and maintaining an integrated system of multipurpose dams, reservoirs, and lands.

As the custodian of a unified system of 29 reservoirs in the Tennessee Valley, TVA must operate these resources for flood control, navigation, and power production. Under long-standing contractual arrangements, TVA also schedules the release of water and generation of power at 12 privately owned dams. The capacity from these dams, together with power purchased by TVA from eight Cumberland River dams, is distributed on the TVA system. Fisheries, wildlife, recreation, and other water uses are also preserved and promoted by TVA to the extent they are consistent with these objectives. TVA approaches its stewardship responsibilities with the intent of harmonizing economic and environmental interests.

In fiscal year 1983 TVA requests $34.3 million for its natural resources programs. Among the major activities to be pursued are:

Under longstanding contractual arrangements, TVA also schedules the release of water and generation of power at 12 privately owned dams. The capacity from these dams, together with power purchased by TVA from 8 Cumberland River dams is distributed on the TVA system.

(1) Regional water management that focuses on water quality in TVA reservoirs and will encourage valley States to correct water quality problems adversely affecting the region's waters. In concert with the States, TVA will identify water quality and quantity constraints preventing full beneficial use of the valley's surface and ground water.

(2) Reservoir releases improvement that tests alternative measures to improve the dissolved oxygen content in water released through dams where dissolved oxygen is naturally low during the late summer and early fall.

(3) Reservoir system operations that include navigation activities, flood hazard analysis, and multipurpose reservoir operations involving such activities as water control operations to manage daily releases from the reservoir system, dam safety analysis, and reservoir land planning and maintenance. TVA will also move ahead with its dam maintenance program, replacing wornout equipment and making additional improvements essential for safe, efficient, and effective use of existing dam facilities.

(4) Forestry resources that promote wise management and use of the valley's timber. Presently underused, this resource has the potential to supply 30 million tons of wood each year for new and expanding forest industries and for direct combustion and alcohol fuel energy uses. The technology developed in this program is transferred to valley States, the U.S. Forest Service, and the private sector for implementation.

(5) Resource management and development support that provides for data gathering and analysis, mapping and monitoring activities, and research and demonstration programs contributing to wise management and development of the region's natural resources.

(6) Land Between the Lakes, an outdoor multiple-use resource management project, that is a focal point for the billion-dollar tourist industry in western Kentucky and Tennessee. The bulk of the funds requested in fiscal year 1983 are for Land Between the Lakes operations and for maintaining existing campgrounds, roads, buildings, and other support facilities.

Another $28.1 million in capital spending is requested to continue construction of a new main lock at Pickwick Landing Dam, to conduct various activities associated with construction of the Columbia Dam and Reservoir portion of the Duck River project in middle Tennessee, and for additions and improvements to TVA's dams and reservoirs.

ECONOMIC AND COMMUNITY RESOURCES

TVA's economic and community resources program assists communities in developing strong local economies that provide private sector jobs. TVA's economic and community resource programs are based on the following precepts:

—Self-reliance, not dependency, is the goal (absence of operating subsidies, for example);

—Technical assistance is dependent upon local, State, or private sector commitments;

—Programs no longer needed are eliminated or responsibilities are turned over to others:

—Strengthening of private enterprise is a major focus; and

—Collaboration with private sector and other governmental entities is routine; relationships are flexible and pragmatic.

On the basis of this philosophy, TVA's efforts in recent years have helped local people pump new life into decaying downtown business districts, recapture a spirit of community self-confidence and direction, develop cooperative business enterprises, and avoid the economic losses of recurring floods, among many other "self-help" endeavors. Assistance is in response to specific needs, not generalized regional plans. These efforts consciously avoid massive infusion of Federal money. TVA's is a positive can-do attitude that responds to local decisions and initiative.

In fiscal year 1983 TVA requests $13.4 million for economic and community resources. Among the principal activities supported with these funds are:

(1) Navigation development and engineering assistance through which TVA advises communities, development agencies, and businesses on further development of the Tennessee River waterway and provides engineering assistance to those who seek it.

(2) Economic development and analysis providing communities with reliable economic and demographic data in developing and carrying out successful local economic development efforts.

(3) Special opportunities counties and cities program that helps stimulate investment in the region's poorest, least developed areas, leading to the expansion of private sector employment. TVA helps with the design and implementation of local development strategies to improve economic conditions in targeted areas.

(4) Floodplain management in which TVA equips communities and individual decisionmakers with the capacity to plan for proper use of the floodplain and thereby stimulate economic growth while avoiding future flood damage.

AGRICULTURAL RESOURCES DEVELOPMENT

With the $3.8 million requested for fiscal 1983, TVA will continue to strengthen the agricultural resources of the valley. Special attention is directed to the needs of small valley farms and family farmers who often are unable to support themselves from the land due to outmoded farming practices.

TVA's role in upgrading agricultural efficiency, productivity, and income has been to introduce new technologies, including conservation, improved fertilizers, high-value crops, farm management systems, and marketing innovations.

Activities are conducted largely through State land-grant universities and their extension service organizations. University researchers help develop and evaluate alternative solutions to problems. Other State and Federal agencies and local development associations are also involved. TVA pursues only a limited number of its program objectives through its own staff.

Projects in fiscal year 1983 include computer-programed whole-farms, introduction of new crop or livestock enterprises on small farms, market development, productive uses of farm wastes, and improving energy-use efficiency on farms. The special effort to attack the problem of soil erosion in west Tennessee will continue, in cooperation with local, State, and Federal agencies.

NATIONAL FERTILIZER DEVELOPMENT

TVA's fertilizer research and development program—managed by the National Fertilizer Development Center in Muscle Shoals, Ala.—will continue to develop efficient, lower cost fertilizers using environmentally safe processes requiring less energy. About three-fourths of the 50 milion tons of fertilizer used in the United States annually is based on past TVA research efforts.

The National Fertilizer Development Center's mission includes: Developing better fertilizers; creating more efficient ways to manufacture them; finding ways to use fertilizers more effectively; and making available new technology to chemists, engineers, soil scientists, educators, and market specialists.

TVA requests $36.8 million for national fertilizer development in fiscal year 1983. Major efforts will include:

(1) Phosphate enhancement, a research program designed to convert low-grade phosphate rock into fertilizer, phosphate is an essential ingredient in modern fertilizers, producing early maturity in plants, increasing root growth, and supporting the reproductive capability of plant life.

(2) Improving nitrogen fertilizer efficiency to develop fertilizers, application methods, and farming practices to achieve a 10-percent gain in nitrogen-use efficiency by 1990. This would save about $400 million in annual expenditures by farmers for nitrogen fertilizers.

(3) Ammonia from coal pilot plant, demonstrating modern industry-developed coal gasification technology which can provide an alternative to natural gas as a feedstock for making ammonia, the source of nearly all nitrogen in fertilizers.

(4) Hardwood fuels research involving the development, in collaboration with the U.S. Forest Products Laboratory, of a viable process using acid hydrolysis for production of ethanol from wood. Development of a technology to increase the alcohol yield from 40 gallons per ton of wood to 80 gallons would go far toward making this an economically desirable product.

COAL GASIFICATION PROJECT

Mr. Chairman, we would like to take this opportunity to bring the subcommittee up to date on TVA's coal gasification efforts. As you know, TVA has been working with the private sector to form a consortium which would construct, own, and operate the north Alabama coal gasification plant in Murphy Hill. Last year, Air Products & Chemicals, Inc.; Kidder, Peabody & Co., Inc.; and Santa Fe International signed an interim consortium agreement. The Synthetic Fuels Corp. has selected the project as 1 of 11 for possible funding.

TVA has taken a number of steps to advance the project prior to its transfer to the consortium. Engineering efforts bythe architect/engineer and the process licenser are well underway. Site preparations by TVA's Office of Engineering Design and Construction are approximately 25 percent complete. Several other major contracts will be started in the coming months. All of these efforts are aimed at transfer of the project to the private cosortium late this year. As directed by Congress, the consortium would assume an obligation to repay the TVA investment with interest out of the plant operating revenues after it takes over the project.

POWER PROGRAM

Mr. Chairman, I would like to bring the committee up to date on the financial outlook for the TVA power system. As you may know, the estimates for power system operations in fiscal year 1983 necessarily are affected by the uncertainty of what actually happens this fiscal year. Such factors as the amount of rainfall, the inflation rate, and interest rates cannot be estimated with certainty 18 months in advance. Attached to this testimony is a sumnmary of the major changes that have taken place since the fiscal year 1983 budget was prepared last fall. I also would like to discuss some of them now.

Although fiscal year 1982 still has 6 months to run, I can report that, on balance, the financial picture for the TVA power system has improved over what has been experienced the past several yers. It is expected that no rate increase will be needed until next October, an improvement over last year when two increases were required. Moreover, we are committee to the goal of requiring no more than one rate increase of less than 10 percent for fiscal year 1983. Factors beyond TVA's control could make it impossible to reach this goal but, as of today, it is within reach.

That this improvement in TVA's rate picture is possible in the midst of a serious recession reflects two fundamental facts: The continuing efforts of TVA management and employees to cut costs and boost productivity and the good fortune to have rainfall so far this year slightly above the historical average.

The principal negative change has been a dropoff in power sales to large, energy-intensive industrial customers served directly by TVA. Instead of rebounding last fall as predicted, the national economy has continued to slip and the impact has been particularly severe in the Tennessee Valley region. As a consequence, TVA now estimates that sales to these customers will be at least 25 percent below the level anticipated for 1982 when the budget was prepared.

On the plus side, in addition to increased hydro generation, has been the reduction in fuel expense associated with reduced power generation. Although interest rates have remained high, they are still within the range forecast by TVA in its 1982 operating plan. The most encouraging positive development is that TVA managers have cut expenditures for labor and supplies by about 10 percent below planned levels, or a projected saving of $60 million for the fiscal year. This means that TVA is living within its budget—and then some—in a period of difficult economic conditions.

Considerable attention in recent years has been focused on TVA's ability to control its operating costs. The TVA board has pledged to Congress that controlling costs will be a priority goal for management. We are now able to report that these cost-control efforts are beginning to pay off. I hasten to add that these initial successes have only motivated the TVA board and its managers to do even better in the future.

A major factor in this progress in controlling costs has been improving TVA's structure for internal audit and evaluation, developing new planning and management tools.

All of TVA's major planning decisions affecting programs funded with both appropriated and power funds are now made in accordance with the procedures and schedule of its corporate planning system. This permits linking all annual budgeting and operating decisions to long-range strategic goals as determined at TVA's annual policy conference in November.

TVA's cost management and responsibility reporting system is being expanded to include all areas of operation, including appropriated programs. This system presents monthly expenditures to managers at all levels. This data is compared to planned expenditures as developed in the annual planning process as an aid in performance monitoring. This timely reporting system permits managers at all levels to identify quickly any significant deviations from the operating plan and to take corrective action.

In the aftermath of Senate oversight hearings last year, TVA engaged the management consulting firm of Coopers & Lybrand to conduct an independent assessment of TVA's internal control system. While the firm said that, for the most part, TVA's internal control procedures were well designed, Coopers & Lybrand also recommended that an office of audit and evaluation, independent of line organizations, be established in the general manager's office to pull together at the corporate level the functions of audit, corporate industrial engineering, and program evaluation. This office has now been established and it has direct access, as needed, to the board of directors. This organizational change will enhance TVA's internal control system along lines recommended by Coopers & Lybrand.

In addition, TVA has established a separate audit review group, chaired by the general manager, to insure appropriate followup of all TVA audit reports, employee and contractor conduct investigations, program evaluations, and recommendations to improve management efficiency. Through this added internal oversight, any problems identified in TVA's management operations can be promptly addressed and corrective measures taken.

In regard to the decision of the TVA board to defer additional nuclear generating units at Hartsville and Yellow Creek, I want to assure the committee that TVA remains committed to providing ample supplies of electricity to support a high level of economic growth in the Tennessee Valley and to do so at the lowest feasible cost to the ratepayer. Our remaining construction program leading to nine nuclear generating units, coupled with the flexibility to restart deferred units or to build smaller coal-fired plants, assures the valley of an ample supply of electric power in the future. In the meantime, the lower level of borrowing made possible by the deferral decision increasingly will help TVA hold down rate increases and maintain a strong financial position.

The committee should also know that this was one of the most difficult decisions in TVA's history. It was a question that produced various points of view among the TVA staff, the public, and the TVA board. However, the decision was ade only after the most intensive review of the facts that was possible to carry out, including an opportunity for review and comment by Members of Congress and the public. These varying responses were read carefully and considered by each board member prior to the vote.

CONCLUSION

These are the highlights of TVA's 1983 fiscal year budget program. TVA believes it to be a balanced and reasonable approach to carrying out the responsibilities vested in TVA by Congress. We would be pleased to provide additional details on any matters of interest to the committee.

APPENDIX 1

SALES AND DISPOSITION OF ENERGY

[In millions of kWh]

	Fiscal year 1982	
	Budget program [1]	Current forecast
Sales:		
Municipalities and cooperatives	77,911	76,979
Other electric systems	192	208
Directly served industries	24,533	18,680
Federal agencies	16,929	16,820
Interdivisional (TVA)	496	458
Total sales	120,061	113,145
Delivered to other utilities:		
Seasonal exchange	1,543	1,518
Sales and other	354	831
Concurrent and inadvertent	7,800	11,225
Total delivered to other utilities	9,697	13,574
Deliveries to Aluminum Co. of America—ALCOA agreement	1,885	1,883
Transmission losses	3,595	3,451
Pumping requirements	1,917	1,926
Total sales and disposition	137,155	133,979

[1] Page 145 of budget program.

CAPITAL INVESTMENT

[In millions of dollars]

	Fiscal year 1982	
	Budget program [1]	Current forecast
Generating capacity additions	$1,333	$1,295
Additions and improvements at power facilities	392	376
Transmission system facilities	99	97
Nuclear fuel	83	171
Acquisition of fuel reserves	12	12
Loans and other long-term facilities	83	83
General facilities	39	59
Total capital investment	2,041	2,093

[1] Page 94 of budget program.

POWER SYSTEM REVENUES AND OPERATING EXPENSES

[In millions of dollars]

	Fiscal year 1982	
	Budget program	Current forecast
Revenues	[1] 4,501	4,351
Operating expenses:		
Production	[2] 2,350	2,170
Transmission	46	44
Customer accounts	1	1
Power consumer services	9	9
Power research development and demonstrations	47	49
Demonstration of power use	15	15
Power administrative and other	100	93
Payments in lieu of taxes	165	164
Total operating obligations	2,733	2,545
Interest charges less other income and deductions	1,168	1,184
Other expenses:		
Interchange power delivered	41	56
Interdivisional sales and rents	−19	−17
Total other obligations	22	39
Total budgeted obligations	3,923	3,768

[1] Page 148 of budget program.

[2] Page 122 of budget program.

BUDGET OVERVIEW

Mr. DEAN. Thank you, Mr. Chairman. I do intend to highlight my statement so as not to take any more of your valuable time than is necessary. Before I begin, I would like to point out, not only are my fellow directors here, but our General Manager, Mr. Willis; Mr. Kimmons, our Manager of Engineering Design and Construction; and Mr. Sanger, our General Counsel, and the other TVA office managers are also here.

Mr. Chairman, I would like to say, in all heartfelt honesty, that after having been at TVA for some 8 months, it has been a pleasure to find out these office managers, the people who are here today, are truly a fine, dedicated group of people. They are professionals, competent; they work very hard and are very honorable people. It has been my honor to be associated with them.

Chairman HATFIELD. The Senator from Tennessee has a special interest in this.

Senator SASSER. Thank you, Mr. Chairman.

Mr. DEAN. To proceed with my abbreviated remarks, Mr. Chairman, members of the subcommittee, I am pleased to be here today to outline the Reagan administration's request of $119.5 million for the Tennessee Valley Authority in fiscal year 1983.

TVA recognizes the need for budgetary stringency in these difficult economic times. Mr. Chairman, in its fiscal year 1983 budget program, TVA is striving to manage each dollar with the greatest frugality. This budget program reflects TVA's guiding philosophy of helping those communities and individuals who are willing to help themselves. We believe that the fundamental resources needed for the economic development of the valley—land, water, energy, people, and commitment—are present. TVA can help put these resources more fully to work by sharing with the States, counties, communities, private industries, and citizens the skills and capabilities it has developed over the years.

The implementation of TVA's statutory responsibilities has resulted in the acquisition of tremendous physical resources—land, buildings, locks and dams, generating stations, roads, recreation facilities, laboratories, and other real property. TVA's programs are directed at the proper maintenance and use of all these resources. All of this property, especially the land, is regarded by TVA as an asset of the American people entrusted to TVA for proper care and use. This philosophy of stewardship, combined with TVA's unique range of capabilities and knowledge, makes possible an approach that fully uses these resources for the benefit of the valley and the Nation today while preserving and enhancing their value to future generations.

I might say parenthetically that another thing that has impressed me besides the quality of the people we have at the top, is the extensive nature of the operation. Most big companies—TVA is the 15th largest corporation in the country now—have their people in large groups. TVA has people located in more than seven States, and it is really a miraculous operation to be managed as well as it is.

We are custodian of a unified system of 29 reservoirs in the Tennessee Valley. We operate these resources for flood control, navigation, and power production. Fisheries, wildlife, recreation, and other water uses are also preserved and promoted by TVA to the extent they are consistent with these objectives.

NATURAL RESOURCE PROGRAMS

TVA requests $34.4 million for fiscal year 1983 for natural resources programs. I will briefly mention the major activities in that group: regional water management, reservoir releases improvement, reservoir system operations, forestry resources, resource management and development support, and our Land Between the Lakes project. In addition to that, we have another $28 million in capital spending requested for construction of a new main lock at Pickwick Landing Dam, to conduct various activities associated with the construction of the Columbia Dam and Reservoir portion of the Duck River project in middle Tennessee, and for additions and improvements to TVA's dams and reservoirs.

ECONOMIC AND COMMUNITY RESOURCES PROGRAM

We also have the economic and community resources program. This program assists communities in developing strong local economies to provide private-sector jobs. Our program is operated according to the following precepts: Self-reliance, not dependency, is our goal; TVA's technical assistance is dependent upon local, State, or private-sector commitments; programs that are no longer needed are eliminated or turned over to others, such as the communities they serve; strengthening of private enterprise is a major focus, and we collaborate with the private sector and other entities as a routine part of our operation.

In fiscal year 1983, TVA requests $13.4 million for economic and community resources. The principal activities are: Navigation development and engineering assistance, economic development and analysis, special opportunities counties and cities, floodplain management.

Next is our agricultural resources development. We request $3.8 million for this program. TVA will continue to strengthen the agricultural resources of the valley with special attention to the needs of small valley farms and family farmers who often are unable to support themselves from the land due to outmoded farming practices.

NATIONAL FERTILIZER DEVELOPMENT PROGRAM

Our national fertilizer development program, managed by the National Fertilizer Development Center in Muscle Shoals, Ala., will continue to develop efficient, lower cost fertilizers using environmentally safe processes requiring less energy. About three-fourths of the 50 million tons of fertilizer used in the United States annually is based on processes derived from past TVA research efforts.

Their mission includes: Developing better fertilizers, creating more efficient ways to manufacture them, finding ways to use fertilizers more effectively, and making available new technology to chemists, engineers, soil scientists, educators, and market specialists.

We request $36.8 million for national fertilizer development in fiscal year 1983. The major efforts will include phosphate enhancement, improving nitrogen fertilizer efficiency, ammonia from coal pilot plant, and hardwood fuels research. Those are the four major program categories.

COAL GASIFICATION PLANT, MURPHY HILL, ALA.

I would like to take this opportunity to bring the committee up to date on the TVA's coal gasification project. As you know, we have been working with the private sector to form a consortium which would construct, own, and operate the north Alabama coal gasification plant in Murphy Hill. Last year, Air Products and Chemicals, Inc., Kidder, Peabody & Co., Inc., and Santa Fe International signed an interim consortium agreement. The Synthetic Fuels Corp. has selected our project as 1 of 11 for possible funding. TVA has taken a number of steps to advance the project prior to its transfer to the consortium. Design and site preparation are approximately 25 percent complete.

TVA POWER PROGRAM

I would also like to bring the committee up to date on the financial outlook for the TVA power system, which, of course, is a big part of our operation. The estimates for power system operations in fiscal year 1983 necessarily are affected by the uncertainty of what will actually happens this year. Such factors as the amount of rainfall, inflation, and interest rates cannot be estimated with certainty 18 months in advance. Included with my testimony is a summary of the major changes that have taken place since the fiscal year 1983 budget was prepared last fall. Some of them I will touch on now.

RATE INCREASES

Although the year still has 6 months to run, the financial picture for the power system, on balance, has improved over what has been experienced in the past several years. It is expected that no rate increase will be needed until October, an improvement over last year when two increases were required.

Moreover, we are committed to the goal of requiring no more than one rate increase of less than 10 percent for fiscal year 1983. This is a goal. Factors beyond TVA's control might make it impossible to reach this goal, but right now it looks to be within reach.

That this improvement in our rate picture is possible in the midst of a serious recession is due to two fundamental facts. One is the continuing efforts of TVA management and employees to cut costs and boost productivity and the good fortune to have rainfall so far this year slightly above the historical average.

POWER SALES OUTLOOK

The principal negative change has been a dropoff in power sales to large energy intensive industrial customers served directly by TVA. Instead of rebounding last fall, as predicted, the national economy has continued to slip, and the impact has been particularly severe on the Tennessee Valley region.

As a consequence, TVA now estimates sales to these customers will be at least 25 percent below the level anticipated for 1982 when the budget was prepared.

On the plus side, in addition to increased hydro generation, has been the reduction in fuel expense associated with reduced power generation. Although interest rates have remained high, they are still within the range forecast by TVA in its 1982 operating plan. The most encouraging positive development is that TVA managers have cut expenditures for labor and supplies by about 10 percent below planned levels, or a projected savings of $60 million for the fiscal year. This means TVA is living within its budget in a period of difficult economic conditions.

INTERNAL AUDIT AND CONTROL STRUCTURE

Considerable attention has been focused on TVA's ability to control its operating costs. The TVA board has pledged to Congress that controlling costs will be a priority goal for management. We are now able to report these cost-control efforts are beginning to pay off. I hasten to add that these initial successes have only motivated the board and its managers to do a better job in the future.

A major factor in this progress in controlling costs has been improving TVA structure for internal audit and evaluation and developing new planning and management tools.

In the aftermath of the Senate oversight hearings last year, TVA engaged the management consulting firm of Coopers & Lybrand to conduct an independent assessment of TVA's internal control system. While the firm said that, for the most part, our internal control procedures were well designed, they further recommended that an office of audit and evaluation, independent of line organizations, be established in the General Manager's Office to pull together at the corporate level the functions of audit, corporate industrial engineering, and program evaluation. This Office has now been established and has direct access, as needed, to the board of directors. The organizational change will enhance TVA's internal control system along the lines recommended by the auditing firm.

In addition, TVA has established a separate audit review group chaired by the General Manager to insure appropriate followup of all TVA audit reports, employee, and contractor conduct investigations, program evaluations, and recommendations to improve management efficiency. Through this added internal oversight, any problems identified in TVA's management operations can be promptly addressed and corrective measures taken.

I might say parenthetically, Mr. Chairman, I am proud to be associated with an agency that is almost 50 years old and has never had a major scandal at the top. There has never been the slightest suspicion. Certainly, we intend to keep it that way.

DEFERRAL OF ADDITIONAL NUCLEAR GENERATING UNITS

In regard to the decision of the TVA board to defer additional nuclear generating units at Hartsville and Yellow Creek, I would like to assure the committee that TVA remains committed to providing ample supplies of electricity to support a high level of economic growth in the Tennessee Valley and to do so at the lowest feasible cost to the ratepayer.

Our remaining construction program leading to nine nuclear generating units, coupled with the flexibility to restart deferred units or to build small coal-fired plants, if needed, assures the valley of an ample supply of electric power in the future. In the meantime, the lower level of borrowing made possible by the deferral decision increasingly will help TVA hold down rate increases and maintain a strong financial position.

The committee should also know that this was one of the most difficult decisions in TVA's history. There was a question that produced various points of view among the TVA staff, the public, and even those of us on the board. However, the decision was made only after the most intensive review of the facts that was possible to carry out, including an opportunity for review and comments by Members of Congress and the public.

These are the highlights of TVA's 1983 fiscal year budget program. We believe this to be a balanced and reasonable approach to carrying out the responsibilities vested in TVA by Congress. We will be pleased to provide additional details on any matters you wish to question us on.

STATEMENT OF SENATOR SASSER

Chairman HATFIELD. Thank you very much, Mr. Dean. We are going to alter the procedure a little bit this afternoon. I am going to invite the Senator from Tennessee to make a statement at this time for the record.

Senator SASSER. Mr. Chairman, thank you. I would like initially to address my comments to the question of oversight of the Tennessee Valley Authority, and then perhaps later follow the chairman's statements and questions dealing with the appropriated budget.

ACCOUNTABILITY AND OVERSIGHT OF TVA ACTIVITIES

Mr. Chairman, on Saturday, I announced a series of hearings to be conducted in the Tennessee Valley on the question of TVA accountability and oversight. I am convinced that we are in a period when there should be more, and not less, congressional oversight of TVA's activities. The public also, and the ratepayers of the Tennessee Valley, I think, are going to demand greater input in the future in the operations of the Tennessee Valley Authority.

Now, along that line, I want to commend Chairman Dean for announcing a series of public listening forums across the length and breadth of the Tennessee Valley. The public, at least, will be afforded the opportunity to present their views, to present their opinions and, I suspect, also to present their grievances. And the TVA management, I am confident, will learn from these sessions.

I, frankly, think that many of the problems that TVA faces today are the result of a failure to listen to the people it serves, and I am not talking about failure to listen last year or the year before or the year before. I am talking about failure to listen to the people for at least a decade, in my observation.

After observing the Tennessee Valley Authority closely, as a Senator for the last 5 years and as a ratepayer for over 25 years, I am driven to the conclusion that the agency will usually act only under pressure before it adopts good public policy.

TVA, unfortunately, in many ways has become a captive of its own bureaucratic inertia and a captive of its own internal bureaucratic needs.

As a Senator from Tennessee who has long associated and supported the good works of the Tennessee Valley Authority, I intend to keep up the pressure on behalf of the ratepayers that I represent. I think everyone in this room, including the board of directors and upper level management of TVA, knows that today the Tennessee Valley Authority is held in the lowest esteem in its history. One of the world's great and leading newspapers, the New York Times, included a quote not long ago about TVA, and this was the quote in the lengthy story: It said, "TVA is the most hated institution in Tennessee."

So let's not kid ourselves. A crises of confidence hangs like a dark cloud over TVA management. This is caused partly by unprecedented and skyrocketing rate increases, but that is really only part of the problem. It is also caused by popular conception that TVA has grown fat, that it's grown inefficient, that it's grown selfish and it is unable to police itself.

Ratepayers, editors, and political leaders all agree that the TVA management on occasion appears arrogant and not entirely concerned about the public's need or interest. And to quote a recent report from the General Accounting Office, "When public input is solicited, it is felt to be a token effort because the board has already made up its mind."

So I would like to say to you, Chairman Dean, and your colleagues today, that I serve on this committee and I am going to serve on this committee in the future, because it stands as a major congressional balance to TVA's activities. This committee and our counterpart committee in the House are the only committees that have annual hearings on the TVA budget and can, therefore, exercise periodic oversight.

I will say to you, frankly, that I am beginning to wonder if more constraints on TVA and its operations are not needed. So I urge you to listen when you conduct your public forums. Then I hope you will return to Knoxville and shape TVA policy in such a fashion that it will restore credibility to the great agency that you serve and of the concept that it represents.

For my part, over the next several months I am going to analyze the various proposals which have been made to improve TVA accountability. I have stated many, many times that I am personally opposed to opening up the TVA Act for amendments. But, if it is determined that TVA cannot put its own house in order, then I will propose legislation to reform TVA's operation and management.

So my message to the TVA Board today is that your agency is in a crisis situation. You have very few friends, indeed, either in the Tennessee Valley area or here in the Halls of Congress. You are confronted by an unfriendly administration and a hostile Director of the Office of Management and Budget in the person of Mr. David Stockman. The very future of the Tennessee Valley Authority and the noble experiment which gave it birth are in your hands.

So I am glad you are bringing the public in. They ought to be a full partner. But I must warn you that, in my judgement, the congressional delegation of the Tennessee Valley, on both sides of this House, are not going to tolerate more window dressing or more half-hearted efforts to comply with the appeals and directives for new initiatives.

So simply stated, we want to work together to see a change in the way that business is done at TVA.

Mr. Chairman, I will have further questions and statements later, but I thank you for yielding.

CARRYOVER OF UNOBLIGATED BALANCES

Chairman HATFIELD. Thank you, Senator Sasser.

Chairman Dean, I believe in your justification you showed a $128.8 million—$129 million—carryover of unobligated funds from fiscal year 1981 to fiscal year 1982. Could you provide for the record what those funds were originally appropriated for and why they were not obligated? And can you also give us an estimate of what you project to be unobligated funds from 1982 to 1983?

Mr. DEAN. Yes, sir.
[The information follows:]

UNOBLIGATED BALANCES

The unobligated balances of estimates included in TVA's lump sum appropriation are budgeted as follows:

[In millions]

Coal gasification demonstration plant	$100.3
Columbia Dam and Reservoir	16.7
Tellico Dam and Reservoir	5.2
All other TVA projects and programs	6.6
Total	128.8

A significant amount of the funds budgeted for the coal gasification project in fiscal year 1981 were not obligated because the future of the project was not resolved until late in the fiscal year. Because from January until June of 1981 the project was the subject of a proposed rescission, new commitments and the advancement of the project was limited. In June 1981, Congress modified this rescission proposal by rescinding $85.5 million of TVA's fiscal year 1981 appropriations and by deferring an additional $42 million until October 1, 1981. This $42 million was included in TVA's unobligated balance at the beginning of fiscal year 1982, and accounts for about one-third of the total.

By the end of fiscal year 1981, TVA had signed contracts which will eventually result in the obligation of the $100 million of TVA's unobligated balance budgeted for the coal gasification demonstration plant. By virtue of the structure of these contracts, formal obligation of these funds will be stretched out over a period of years.

Deferred funding for the Columbia Dam and Reservoir in the amount of $15.8 million was not released until August of 1981. Due to the late release of this deferral, these funds were not obligated during fiscal year 1981.

The unobligated balance for the Tellico project was the result of the extension of the project schedule for 1 year into 1982. This was due to certain project features requiring additional time to complete.

The remainder of the unobligated balance results from all other TVA projects and programs and is attributable to variations, such as unexpected delays in contract awards, that are normal to any estimation process.

TVA now plans to carry over an estimated $63.7 million into fiscal year 1983.

PHASING OUT OR TRANSFERRING OF PROGRAMS

Chairman HATFIELD. I would like to turn to that portion of your statement where you refer to TVA programs that have achieved their objectives and are routinely phased out or transferred to others for implementation. In the economic and community resource programs, could you give the committee some additional examples of those programs which have been phased out or transferred?

Mr. DEAN. Yes, sir; Mr. Rick Morgan will discuss that process.

Mr. MORGAN. Mr. Chairman, some examples are community health assistance programs to the valley, demonstrations in community energy that have been taken over and operated by local communities, and the phasing out of some regional planning assistance.

COORDINATION WITH APPALACHIAN REGIONAL COMMISSION

Chairman HATFIELD. Do you have any procedure or practice developed with the ARC to insure there is not duplication or overlapping in any of these community development programs?

Mr. MORGAN. Yes, Mr. Chairman. We frequently meet with the ARC officials here in Washington as well as with State representatives to coordinate programs. There is no overlap.

Chairman HATFIELD. I would like to turn for a couple of questions—by the way, I have a number of questions I would like to submit, Chairman Dean, to you and to the board for the record. If you would respond promptly to them, I would appreciate it.

Mr. DEAN. Yes, sir.

TVA NUCLEAR CONSTRUCTION PROGRAM

Chairman HATFIELD. Let's turn to TVA's nuclear power program. Last year, Mr. David Freeman—and we have to keep our Freemans separated—and the Reagan transition team called the TVA growth demand projections overly optimistic. I believe that was the phrase used. OMB also suggested TVA consider deferring two or three nuclear plants as a result of the lower than anticipated growth. Yet, I believe the record will show last year there was testimony indicating very strong reluctance to consider these suggestions.

In your testimony, Chairman Dean, you indicated earlier this year the TVA board did, in effect, after much serious debate and discussion, defer two nuclear units, Hartsville and Yellow Creek. Could you, in light of these—if I have stated this case correctly—comment on the TVA growth demand projections and what has apparently affected this particular change in the earlier estimates you made? And, also, if you would comment on the reasons for the decisions to defer the two nuclear powerplants.

Mr. DEAN. Mr. Chairman, there were two or three major developments that occurred during 1981 that are significant. First, we found that the projections of future power sales to the U.S. Department of Energy were considerably less than our construction program was designed to supply. Second, studies of the valley economy have shown that the rate of growth in the valley in the 1970's was higher than we had previously thought, and thus the rate of electric consumption tracking this higher rate of economic growth turned out to be somewhat lower than we had realized.

So we established a new range of assumptions for growth in the valley and then decided that we would have to readjust our construction program to reflect these new facts and still build to the high end of the demand range. This is to insure that there will be enough power for the valley.

As I said, the biggest changes were the relationship between economic growth and electricity use, and load requirements of the Department of Energy.

As I said earlier, this decision was one of the most difficult decisions that TVA has had to make. We asked for considerable public comment. We employed outside agencies, such as the University of Tennessee, to review our economic forecast to make sure we were on solid ground.

As a result, we did decide to defer three units—we had a split vote. The difference on the Board was not all that great. I supported continuing construction at a reduced rate and my fellow directors supported deferral. This means putting the units in mothballs, with the option to restart, if necessary. We were all in essential agreement that we could not afford to continue the existing rate construction on those plants.

I hope I have answered your question, because there were several things that did change during 1981 since the transition team filed their report last spring.

Mr. RICHARD FREEMAN. Two specific things. We made our own independent analysis of the DOE load a major component of the TVA load which indicated that the numbers that DOE was projecting were just too high. Second, the U.S. Department of Commerce came out with their revision of what had happened in the Tennessee Valley and throughout the country in the 1970's, which indicated, contrary to the prior data, that the valley had grown more than the previous data indicated.

We knew what the electric growth was. We were essentially flat during the late 1970's, but we had thought that economic growth had been relatively flat, too. The economic growth was not flat during that period, so it is clear we have had a major disconnect between economic growth, on the one hand, and electric growth, on the other. This is an encouraging sign. It means that, one, conservation is working as well and better than we had thought; and second, that high electric prices do work just the way low prices worked in the 1930's and 1940's, only in the reverse, which, of course, tended to discourage use.

In the light of those two changed facts, we concluded that we should defer.

Mr. DAVID FREEMAN. To supplement that slightly, I agree with what my colleagues have said, and I would like to put it in more historical context. When I first came on the Board, there were 14 nuclear powerplant units that had been ordered and in various stages of construction. We initiated a very aggressive conservation program in TVA which is now the leading conservation program in the country, and I am proud to say we have entered into a cooperative agreement with Bonneville Power to share our knowledge with them. We are also going to cooperate with them on fuel research to try to convert the hardwood that is wasting away in each of our regions for domestic fuel.

We deferred four units early in 1979, really as soon as we looked at the load projections, and realized, quite frankly, in light of what was happening, that TVA was overbuilding. As we gathered more information we took another action last year to defer one more unit and this year three more. We have had to err, quite frankly, on the side of being sure we had enough power because we have utility responsibilities. I think our actions have been to recognize that conservation is our cheapest and most environmentally benign source of energy. Our objective in the Tennessee Valley is to build as few powerplants as we need for rapid economic growth and to get as many jobs per kilowatt as we can get.

IMPROVED FINANCIAL CONDITIONS

Chairman HATFIELD. Now, you say this has improved your financial situation. Can you qualify that for us.

Mr. DEAN. We will borrow in a given year now because of these deferrals some $200 million less than we would have otherwise. Now, our annual construction program is in the neighborhood of $2 billion. We are paying about 14 percent for money now. So the annual interest on $200 million is about $28 million a year and then you add that to the next year and it keeps piling up.

By 1990, it becomes a rather significant amount that we have not borrowed that will overall reduce our capital needs. It is not a drastic thing; it is a little bit every year.

Chairman HATFIELD. What effect will that have on these?

Mr. DEAN. The first year, almost insignificant. By 1990, somewhere in the neighborhood of 3 to 7 percent lower power rates than otherwise, depending on whether we hit the low- or high-demand forecast.

Mr. DAVID FREEMAN. If you take all the deferrals that this Board has ordered, our rates will be 15 to 20 percent lower in the future than they would have been if we had continued that construction program.

Mr. RICHARD FREEMAN. Our General Manager says it's 23 percent.

Mr. DAVID FREEMAN. Let the record show that for once I understated something.

Chairman HATFIELD. Could you provide for the record a number on your nuclear construction program?

Mr. DEAN. Yes, sir.

[The information follows:]

NUCLEAR UNIT DEFERRAL

If high-load growth occurs and TVA must restart construction on these units, TVA's ratepayers will have lower rates from 1982 to 1992, with a maximum 3 percent in avoided rate charges in 1990, as a result of deferral of Yellow Creek unit 1 and Hartsville A units 1 and 2. With high-load growth, TVA wholesale rates starting in 1993 will be from 2 to 3 percent higher as a result of the deferrals. However, if low-load growth occurs, TVA's ratepayers will have lower rates from 1982 to beyond the year 2000, with a maximum avoidance of rate charges of from 6 to 7 percent in 1990.

PUBLIC PARTICIPATION

Chairman HATFIELD. I am glad to hear you are meeting with the Bonneville Power, because I have long recognized your progressive position as it relates to conservation.

As you know, the Pacific Northwest Electric Power Planning and Conservation Act set into law a priority system for the investment in new energy sources. That act requires BPA to give cost-effective conservation top priority in meeting the region's energy loads.

I am glad you are giving them the benefit of your experience.

Following up a little bit on Senator Sasser's comments, if I may, we suffered from some of the same lack of public understanding of the Bonneville Power Administration's policies and how they arrived at those policies. I want to give you a copy of that law now. I hope that possibly in your own review you might—in talking with Bonneville

Power Administration itself, the leaders of that agency—get some ideas as to the new council we have formed in this bill that mandates public involvement in a definitive way, not just an ad hoc hearing, temperature testing, that sort of thing.

I am not speaking at all to the merits of this situation because I am not that familiar with your local problems. But I would like to give to Senator Sasser, and others, a copy of the public law that shows how we have provided for public participation in planning and policymaking. This can really be very helpful to the agency itself as well as to give the public a better feel of what their relationship is to the agency. I only offer that as a possible suggestion.

Mr. DEAN. We appreciate it.

Chairman HATFIELD. Because we have been down that road and learned from that experience and, like you, have been leaders in conservation. Your sharing that experience with us might be a way in which we can reciprocate and share some of our experience with the Tennessee Valley Authority.

Mr. DEAN. We appreciate that.

Chairman HATFIELD. I will put my additional questions in the record and invite Senator Mattingly to make any comments or statements, or ask such questions as he may wish.

FEDERAL FINANCING BANK

Senator MATTINGLY. I will submit questions later.

Mr. Dean, I would like to ask one question about the amount payable to the Federal Financing Bank that you projected in 1982, projected in 1983, $9.5 billion.

Mr. DEAN. We are borrowing something in the neighborhood of 2 billion new dollars every year, Senator.

Senator Mattingly. This is the outstanding borrowing you have. I just wonder if you see any slowdown in that respect.

Mr. DEAN. Yes, sir; at the end of fiscal year 1982 our outstanding borrowings will be $14.9 billion. Our rate of borrowing for construction is definitely going to slow down partly because of these deferrals and because we are finishing up our Sequoyah plant. These are large expenditures associated with nuclear plants. Our Watts Bar plant is well along and the same goes for our Bellefonte plant.

Senator Mattingly. Do you see a forecast decline in the amount you are requesting from FFB?

Mr. DEAN. Yes, sir; there will be some decline.

Mr. RICHARD FREEMAN. Decline from the amount we have originally projected, but we will continue to be borrowing.

Senator MATTINGLY. Large or small decline?

Mr. RICHARD FREEMAN. It's in the neighborhood of——

Mr. DEAN. $200 million a year.

Senator Mattingly. Less?

Mr. DEAN. Yes; less each year.

Mr. David Freeman. I think the record should show that the decision to defer these three units will mean over $5 billion that we will not borrow that we would have otherwise borrowed had we continued construction. I feel that is a contribution to strengthening the national economy by taking that pressure off the capital market when we don't need the power.

Senator Mattingly. I will submit more questions for you later.

Chairman Hatfield. Senator Sasser.

TVA'S APPROPRIATED BUDGET

Senator Sasser. Thank you, Mr. Chairman. I want to deal now with the appropriated budget. Those of us in the Tennessee Valley area are aware of the history of TVA and the efforts that TVA has made to help arrest soil erosion in the Tennessee Valley area.

In the past 10 or 15 years, as I indicated in my opening statement, TVA's contributions in many areas, which have been enormous, have been obscured by electrical rate increases and by other problems. Now, prior to this hearing, I asked TVA to put together a series of factsheets outlining the social and economic benefits of the appropriated budget that we are hearing testimony on today. Without objection, I would like to insert the TVA factsheets into the record, Mr. Chairman.

Chairman Hatfield. Without objection, so ordered.

[The information follows:]

NATURAL RESOURCES

TVA has recognized from its beginning, almost 50 years ago, that the natural resources of the Tennessee Valley provide a common focus linking local, State, and Federal agencies and commercial and industrial interests with the well-being of the region's citizens. Through a working partnership with the people and their institutions, TVA is committed to fostering the creative management and development of these resources, not only to meet current needs but to support the future aspirations of the region and the Nation. Today the land, air, and water that make up this natural resource base must meet the complex daily demands of a rapidly changing and inter-dependent society. At the same time, regional stewardship of natural resources requires a commitment to future generations of Americans so that their potential for accomplishment is not sacrificied. Highlights of selected TVA natural resources programs follow:

--TVA shares custody of one of the Nation's most significant water resources. The system of 38 multipurpose reservoirs representing an investment of over $1.2 billion Federal funds, must be managed primarily for the purposes of promoting navigation and controlling floods and, consistent with those purposes, generating electric energy. Flood control benefits alone are estimated at more than $140 million each year, including $8.4 million in the lower Ohio and Mississippi River Basins. Commercial traffic on this system reached 31.4 million tons in 1979, saving shippers some $132 million. About 80 percent of the freight originated from or was shipped to locations outside the region. Private industry has invested some $3. billion in waterfront plants, terminals, and distribution facilities along the waterway, with more than 80 percent of this development occurring since 1960. TVA's cost to operate and maintain the dams, reservoirs, and 300,000 acres of surrounding land is $20,800,000.

--Conservation of treated water is the most cost-effective way to increase water supplies. Since 1979 TVA has assisted over 80 communities, to find and repair leaks in their water distribution systems. As a result of this work over 90 million gallons of treated water with a wholesale value of $60 thousand are saved monthly. The cost to TVA to achieve these results is about $30 thousand per year.

--The spread of aquatic weeds is rendering many southern reservoirs almost unusable. The dominant weeds cannot be eradicated with current technology. TVA's 1983 expenditure of $560,000 will not only be used to contain current weed infestation, but will also test alternative methods in hopes of finding long-term solutions applicable to reservoirs throughout the southern United States.

--With passage of the National Aquaculture Act of 1980 the U.S. recognized the limit to traditional fishing methods and the need to develop aquaculture nationally. The U.S. imports $3 billion worth of fish products annually and the demand is expected to double in less than 20 years. In 1983 TVA will spend $190,000 to continue a demonstration of a pilot-scale production facility, using waste heat from the Gallatin Steam Plant. Return on investment is projected to be 10 percent and industry recognizes the tremendous potential, including a positive impact on U.S. balance of payments.

--The Tennessee Valley represents the Nation's greatest remaining hardwood resource, thanks in large part to TVA's pioneering efforts to rebuild the resource from its low ebb in the 1930s. These forests support a $3 billion industry employing more than 59,000 persons with annual payrolls of $500 million. Demand for this resource will continue to grow, with a resultant national wood shortage predicted early in the next century. At least 40 firms given TVA assistance have expanded or established new operations in the past three years. An example is TVA's promotion of inexpensive preservative-treated lumber which helped establish six new plants. Seventy new jobs resulted, and regional lumber production has increased about 60 million board feet. TVA's cost to achieve these results is $1,700,000.

- TVA is developing and testing devices to increase the dissolved oxygen level in rivers below TVA dams. The increased waste assimilative capacity will mean savings in water treatment costs for industries and municipalities. Although benefits are difficult to estimate at this early stage, this will mean many millions of dollars to the Valley economy, and will provide solutions to a nationwide problem. The cost of this effort in 1983 is $1,500,000.

- Some 15,000 flood-prone acres along TVA's reservoirs are dewatered. Pumping protects railroad and highway embankments crossing these areas, makes agricultural production possible on several thousand acres, protects 5,000 acres of timber, and provides critical food and habitat for 500,000 ducks and geese that make up 10 percent of the continent's Mississippi Flyway. At a cost of $450,000 to TVA, the benefits from this activity are estimated at $2.3 million annually.

In summary, TVA works to achieve natural resource development and management programs to support economic progress while at the same time enabling the quality of life of today and tomorrow to be founded on the protection and growth of the resource base itself. It should be emphasized that TVA cannot and does not function alone. Indeed, most natural resources in the Valley are in private hands or are the responsibility of other public entities. However, there are operational obligations that TVA alone is in a position to meet effectively. Such obligations are embodied in the operation and maintenance of a vast reservoir system, the attendant water supply and quality concerns, and basic stewardship of publicly owned lands and facilities around these reservoirs.

At the same time, TVA is dedicated to the orderly and timely assumption of increased responsibilities by local and State agencies as those agencies develop the necessary capabilities. To assist local and State agencies, TVA adapts and demonstrates new technology which can make these agencies more efficient in carrying out their responsibilities. Every effort is made to avoid duplication, to ensure cooperative responses to clearly defined problems, and to nurture those essential links with the people and their agencies--both public and private--that have been forged through half a century of experience.

OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT

In response to its legislative mandate to foster the economic and social development in the Tennessee Valley, TVA's economic and community development activities have evolved into a program responsive to the contemporary economic development problems and needs as well as opportunities of the region.

This program is characterized as that of a catalyst, largely utilizing corporate technical expertise and relevant information not otherwise available to spark citizen participation and private sector involvement/investment in achieving lasting economic vitality. Entering a community only upon request, the ultimate goal of TVA's economic and community development program is promoting local self-reliance rathern than long-term dependency on Federal subsidies which have traditionally tended to stifle local initiative and control.

TVA's approach provides a model for how to achieve lasting economic development using a small number of Federal dollars with private sector initiative and financial investment making up the greatest share of the ultimate cost.

TVA has two basic programs, economic resources and community resources. The essence of each is the provision of a broad range of technical assistance rather than large amounts of capital dollars to effect economic growth.

The economic resources program specifically works to strengthen local economies by stimulating private sector job creation, capitalizing on local resources and responding to local goals and objectives for further economic growth.

- Through the navigation development and engineering assistance effort special emphasis is given to development of communities along the Tennessee River waterway. To date 46,000 jobs have been created along the river and its tributaries, at least in part due to TVA's efforts in cooperation with State and local development agencies and private industry. Additionally, as many as three jobs off the waterway are created for every one on the river.

--Through the skills development effort TVA has successfully demonstrated the linkage between private industry, State and local government, and appropriate educational institutions necessary to ensure the availability of a workforce possessing the skills needed by industry both now and in the future. Tupelo, Mississippi, for example, met not only the skill requirements of existing businesses, but possesses the flexibility needed in terms of new curricula development to accommodate future workforce needs brought about by new incoming firms as well.

--The special opportunities counties and cities (SOCC) activity earmarks those pockets of poverty around the Valley characterized by lower than average per capita income, high unemployment, low levels of education and skills attainment, lack of access to available job opportunities, lack of capital necessary to stimulate local economic growth, and significant dependence on public welfare assistance. For example, in Blairsville, Georgia, TVA provided a working capital loan to a local industrial development authority to assist a local manufacturer who had demonstrated the capability to expand but could not secure loans from private lending institutions because of the remote rural location. TVA's loan is allowing the company to hire an additional 225 employees which will have a substantial impact on the local economy. In Morgan County, Tennessee, TVA helped local officials utilize local natural gas resources by constructing a pipeline to their industrial site. The availability of gas was the prime factor in the recent location of a manufacturer employing 300 residents.

The goal of TVA's community resources program is to assist and facilitate a community's accomplishment of economic growth and development goals, ultimately leading to local self-reliance. TVA helps communities willing to help themselves overcome specific barriers to further growth.

--Through its community preparedness activity, TVA has formed strong partnerships with the Valley States, joining forces in order to work with community leaders in identifying opportunities as well as barriers to economic growth. Once these obstacles are recognized, specific growth strategies similar to the one recently completed for Florence-Lauderdale County, Alabama, are developed.

--The Townlift program focuses on central business district revitalization. The goals of this effort include increases in the local tax base, improved local markets, energy conservation, job retention, and job creation. TVA works with local leaders and agencies and develops a concept plan which in turn is used to attract private investment and bring about improvements in such areas as traffic flow, parking, pedestrian safety, and renovated or restored buildings. In 1981, 30 communities received Townlift assistance, which in turn generated a public-to-private investment ratio of 1 to 14.1. The entire program is intended to help make small and medium-sized communities more efficient, functional, and competitive.

--Floodplain management provides communities and individual decisionmakers with the capacity to plan for proper use of the floodplain, thereby avoiding future flood damage. During 1981 TVA provided technical flood hazard information and guidance to local officials and developers on about 500 sites. Technical assistance was provided to local officials in developing or administering local flood damage reduction ordinances and other floodplain management measures—in approximately 250 communities.

In the Duffield Industrial Park in southwest Virginia, for instance, TVA, in cooperation with local government agencies, developed and completed a flood control project which dried up the previously swampy 236-acre tract of land. This made the property, which was level and adjacent to a railroad and a major interstate highway, extremely attractive as an industrial park. As the land was drying, TVA provided an industrial park design and served as a catalyst, working with Federal and local agencies and private firms, to develop necessary infrastructure to that the site would attract new industry. Currently over one-half of the park has been developed by six industries resulting in the creation of 1,500 jobs with an annual payroll of over $15 million. Further, 98 percent of those employed are native to the area; of these employees, 80 percent were previously underemployed.

These examples demonstrate how TVA, using its motivational skills and technical expertise, can provide the critical catalytic role which enables communities to overcome persistent barriers to economic growth. TVA's entire budget for economic and community resources in 1983 is $13.4 million. The return on this investment in private investment, pride, and better living and working conditions will be many times that amount.

NATIONAL FERTILIZER DEVELOPMENT CENTER

The National Fertilizer Development Center (NFDC), operated by the Tennessee Valley Authority, at Muscle Shoals, Alabama, is the Nation's only institution conducting a significant R&D program to create new and improved fertilizer products and more efficient methods for making them. It is one of the big factors in America's agricultural success story.

In terms of industry adoption of research, the TVA fertilizer center is without equal. There are two good reasons for this: (1) The research has a strong practical orientation, and (2) implementation gets as much emphasis as creation.

TVA-developed processes are used throughout the commercial fertilizer industry. Hundreds of industry representatives travel to Muscle Shoals each year to learn of the latest advances and to solicit help on specific problems. In addition to following research progress, the industry buys experimental fertilizers from TVA for testing and introduction in its own systems. TVA engineers and field staff also work closely with university specialists and members of the industry to promote adoption of new technology. All of this speeds market development. Once a new product is established and demand for it is being met by commercial producers, TVA curbs its output and shifts emphasis to other areas.

Thus, the TVA Fertilizer Center is very much a part of America's food production process. We pride ourselves on being one of the best fed nations in the world. We export huge amounts to others. Although we complain about high food costs, the fact is that food remains one of our best buys.

Fertilizer is an unsung hero of this success story.. Scientists estimate that 35-45 percent of the gain in food production over the past 20-30 years is due directly to greater use of fertilizers. The NFDC has been the motivating force behind the advances in fertilizer technology and use in recent decades.

The NFDC is a team composed of research chemists, chemical engineers, agronomists, economists, and educators. They work in laboratories, greenhouses, pilot plants, and prototype production facilities to develop improved fertilizer technology. Then they work alongside university specialists, industry leaders, and others to achieve commercialization of practical new knowledge and get the benefits of research to farmers and consumers.

Detailed Examples of NFDC Impact

* TVA methods and equipment are used in manufacturing most U.S. fertilizers. Patents are obtained on new processes; then, nonexclusive licenses are granted to any company for use of the patented developments. TVA processes have been licensed for use in more than 550 plants.

* Many major fertilizers were developed and/or introduced with TVA's help:

  - Concentrated Superphosphate - First fertilizer produced and introduced by TVA. TVA process widely used to make superphosphates.

  - Ammonium Nitrate - Helped develop process to make munitions material safe. Introduced widely following WW II. Now major nitrogen fertilizer.

  - Diammonium Phosphate - Saw unrealized potential. Began introduction and developed more economical manufacturing process. Now major fertilizer worldwide. Most is made by TVA process.

  - Urea - Although introduced by private sector, TVA has developed and introduced improved granulation process. Also developing new family of urea-based fertilizers.

- High Analysis. TVA always has emphasized products with high nutrient (plant food) content. Average nutrient content up from 18 percent to 45 percent. Farm use of plant nutrients in 1980 was almost 23 million tons. This was supplied by 52 million tons of fertilizer materials; to supply the same nutrients in 1930-type fertilizers would have required 122 million tons of product. High analysis saved more than $1 billion in freight and handling (at $15/ton).

- Continuous Granulation Process. One of the keys to high analysis and to improved product quality was TVA's development in early 1950's of new granulation technology that soon became industry standard. Most producers use it today.

- Fluid fertilizers - TVA led in developing and introducting fluid fertilizers. TVA technology is estimated to be involved in 90% of the U.S. annual production of fluid fertilizers. In recent years, emphasis has been on 'suspensions'—fluids that contain some undissolved solids but which can be sprayed on fields. Their higher analysis (than solutions) is advantageous.

Recent Trends and Emphasis

- Major progress in developing energy-saving manufacturing processes:
    - Pipe reactor for making fluid fertilizers uses chemical heat of reaction to replace fossil fuel needed to evaporate water to improve quality. TVA pipe reactor is used today in more than 125 fluid plants.
    - Pipe-cross reactor is a variation for use in granulation plants. It saves 85-90 percent of fuel needed to dry newly formed granules--a saving equal to more than 10 million gallons of oil in the two dozen plants already using the process. Huge diammonium phosphate plants are beginning to adopt the process.
    - Falling curtain/evaporative cooling process for making granular nitrogen fertilizers is still under development, but is attracting wide commercial attention. It shows promise for improving product quality while cutting energy needs and production costs. Several companies are following research progress very closely.

- Processes for Low-Grade Phosphate Ore. As deposits of high-grade Florida rock are depleted, the Nation must begin to turn to ore that contains less phosphorus and more impurities. We are developing new technology needed to process this ore into fertilizers. Goals are to improve resource use, conserve energy, and recover uranium from the low-grade ore.

- More Efficient Use of Nutrients. Goals are to conserve the resources used to make fertilizers and to reduce farmers' fertilizer costs. Searching for product modifications to improve efficiency of fertilizer nitrogen, ways to make better use of phosphorus and potassium 'stored' in soil from previous fertilization, and possibilities for using wastes to supply some nutrients.

- Alternative Feedstocks - Nearly all U.S. ammonia, the source of most of our fertilizer nitrogen, is based on natural gas as a feedstock and a fuel. Deregulation of gas prices threatens nitrogen fertilizer production in the years ahead. TVA has built a specially designed prototype coal gasification plant to show how ammonia plants can use coal when natural gas is too costly. The plant will demonstrate modern U.S. technology. Energy and chemical companies as well as ammonia producers are following this project closely.

Ties with USDA

TVA researchers maintain contacts with the U.S. Department of Agriculture to keep abreast of their research, to apprise them to TVA efforts, and to relate the two programs for maximum benefit.

The USDA for many years also had a fertilizer research and development effort, though less comprehensive than that of TVA. That program was transferred to

TVA in 1965. TVA now is the only agency with a significant fertilizer technology development program.

Funding

TVA's appropriations request of $36.8 million in 1983, although a reduction of 10 percent from the 1982 appropriation, will allow this import effort to continue. As demonstrated by the examples above, this investment is repaid many times over in better fertilizer products and processes which translate into lower costs to the American consumer and lower energy consumption.

AGRICULTURAL RESOURCE DEVELOPMENT

TVA has traditionally recognized the importance of agriculture in the growth and development of the Tennessee Valley. We have been intimately involved in programs to improve agriculture in cooperation with farmers, land-grant universities, and other organizations.

One-third of the region's work force--121,000 farmers and 350,000 agribusiness employees--produce an estimated annual $2.0 billion in farm product sales and almost $6.0 billion in agribusiness volume. Valley farms are generally small--averaging about 120 acres compared with 400 for the U.S. Valley agriculture is diverse, its soils vary widely, and topography ranges from flat or gently rolling to steep slopes. The type of farming varies also. Row crop and livestock production are dominant in the western Valley counties, central and east Tennessee, and north Alabama. In the extreme eastern part of the Valley, where cropland is scarce, farmers rely heavily on high-value crops.

TVA programs are conducted cooperatively with land-grant colleges and other agencies. The objective is to help improve efficiency and increase production on Valley farms. This involves a number of intensive development and educational activities including whole-farm demonstrations, enterprise demonstrations, fertilizer trials, soil conservation and productivity demonstrations, technical assistance in agriculture and rural development, studies and investigations to support resource development activities, and related activities. The programs we conduct vary to meet the special needs of each area.

The major thrust of the program remains the same throughout the region--to increase the management capabilities and productivity of family farms. We are making some good gains in meeting these objectives.. The examples below illustrate this progress.

--Rapid Adjustment Farm Demonstrations involve intensive planning on a few farms to demonstrate the development of agricultural potential. The idea is that by working intensively with a few selected farmers in a well documented program, practical experience with use of advanced technology can be accumulated in four years that might require as long as ten years under normal conditions. Most farms double and triple income in the four-year period.

--Resource Management Farm Demonstrations (RM) help spread improved farming practices to other farmers. Many of these farms also double and triple income in four years and help stimulate similar progress on other farms. We have 400 to 600 RM farms on the program each year. An example of whole farm progress can be found on 37 resource management farms in Tennessee. These farms experienced an increase in gross income from $45,116 the first year on the program to $113,624 the last year on the program. Net farm income increased from $8,657 to $23,191--a 161-percent increase.

--In western North Carolina and eastern Tennessee, many farmers have only 10 acres or less land to cultivate. The cooperative program has successfully introduced many high value cash crops including vegetables and fruits and native greenery. In North Carolina, for example, a $5 million annual vine-ripened tomato industry was developed.

Another $5 million annual income enterprise has been developed in western North Carolina. That is the production and sale of ornamental and horticultural crops.

- --Market development is another success story. TVA and its program partners help develop marketing alternatives for Valley farmers. An example is a feeder pig program in the Bear Creek Watershed of north Alabama. A northwest Alabama feeder pig association was formed and a marketing facility developed. The market started in 1964 with 638 pigs for total sales of $7,906. By 1975 membership had grown to 680 and total sales reached almost $2 million. Farmer interest, volume, and dollar sales are continuing to increase.

- --In recent years concerted effort has been focused on preserving farmland productivity and decreasing soil erosion. The most intensive program is being conducted in west Tennessee where average erosion on sloping cropland is 40 tons of soil per acre per year. The heart of the program is Resource Management Conservation farms. In the beginning the 85 farms in the program were losing 244,390 tons of soil annually. After conservation plans are fully implemented, soil losses will drop by 74 percent.

- --Educational activities have emphasized the payoff in production, income, and soil erosion control from conservation measures. An example of impact is the growth in no-till farming. Acreage in the soil conserving no-till system has increased from less than 43,000 acres in 1978 to 200,000 acres in 1981. Even higher acreage will be in no-till farming in 1982.

Returns on the Federal investment of 5 to 1 and 7 to 1 are not unusual in this program. This is the result of a very practical approach, careful planning, and an intensive program of self-evaluation designed to improve what we do. TVA's request for $3.8 million would be a wise investment in the agricultural resource of the Valley.

HARDWOOD FUELS RESEARCH

TVA has established a comprehensive program to develop information so that private enterprise can more effectively utilize the Valley's vast renewable resources, primarily hardwoods. When this program is carried to fruition, it will give the Tennessee Valley region a capacity to supply a substantial portion of the requirements for liquid fuel as well as heat and steam for industry.

Other areas of the country also would benefit from this research; the hardwoods extend throughout the Appalachian region into New England and into the Midwest. The information developed would in turn be applicable to the softwoods that are abundant in many sections of our country, particularly the far Northwest. The nationwide implication of the TVA program, particularly the most important portion—production of ethanol from wood, cannot be understated. Our country has a tremendous woody biomass capacity and it is of utmost importance that we ensure our ability to derive fuel independently of foreign influence such as occurred in the previous oil embargo.

The program includes features of renewable resource assessments, alternative crop evaluations, development of conversion technologies, product testing, and technology transfer—an integrated systematic program that provides additional side benefits because of its completeness. Utilization of the hardwood resource is emphasized because the region has virtually no petroleum reserves, is a net importer of agricultural feedstocks, but has an abundance of underutilized hardwood forest reserves from which liquid fuels can be produced. TVA, furthermore, has a responsibility to conserve natural resources and to develop effective, efficient, and economical uses for Valley renewable resources. The use of renewable energy to conserve and/or replace petroleum fuels is an important part of TVA's overall program.

More than half of the total area of the Tennessee Valley is in forest. Hardwoods account for over 80 percent of the forest inventory, and annual growth is nearly three times current harvest. As a result, hardwood prices are depressed to the extent that good management is usually not practiced. Even without more intensive management, 30 million tons of hardwood is available annually for energy use. This is sufficient to supply about one-third of the energy currently used in industrial applications and to produce about 1 billion gallons of ethanol, equivalent to about one-fifth of the Valley's automotive fuel needs.

The principal objective of the program is research to develop an acid hydrolysis process for conversion of hardwoods to ethanol. This research is carried out in cooperation with the U.S. Department of Agriculture's Forest Products Laboratory in Madison, Wisconsin, and is an extension of previous cooperative work with the laboratory. This cooperative activity served as a basis for the only commercial process currently used to produce ethanol from wood—a process practiced only in the USSR where different economic conditions exist. The current research has as a goal to increase yields from 40-50 gallons per ton of wood to 75-80 gallons per ton of wood, to reduce investment and operating costs, and to use the bark as feedstock for process heat and hence improve energy efficiency.

TVA has coordinated its efforts with other organizations and agencies to ensure there is no duplication of biomass activities. To our knowledge, no other Government agency has the available physical resources nor development work underway on the promising acid hydrolysis route at the scale TVA has initiated. TVA participated in an intergovernmental agency biomass conference coordinated by the U.S. Department of Energy (DOE) and has held discussions with appropriate DOE and U.S. Department of Agriculture organizations. Coordinated efforts are underway with several universities, and information exchanges have taken place with private research organizations in the United States and foreign countries. Every effort is being made to ensure that research and related activities in producing ethanol from woody biomass are not duplicated.

TVA's comprehensive program to develop information and to encourage use of renewable fuels is under the direction and responsibility of a single manager. Significant progress has occurred in a very short period of time with very limited funding. Some activities can be postponed to meet the administration's budget goals. However, the accomplishments and potential benefits of this program relative to the low cost should be seriously studied. This unique program has merit as a role model for a more coordinated, comprehensive, and effective national renewable fuels program.

Senator SASSER. Just before we went home for Christmas, we all heard rumors that the Office of Management and Budget was planning to make drastic and severe slashes in the TVA appropriated budget, perhaps a cut of 33 percent or more. Well, TVA took a cut, but I am happy to say that it was not as serious as many of us had originally feared.

Next year is another story, and I think it is clear that there is not much warmth for TVA in this administration, to say the least, and next year OMB may not be so generous. So I would like to give TVA this opportunity to tell this committee why the appropriated budget is valuable to the Tennessee citizens of the Tennessee Valley area and also valuable to the taxpayers of this country.

In short, Mr. Chairman, we want to help you make a record if you will just tell us what we are getting back for the tax dollars that are going into TVA.

Mr. DEAN. The people who administer these programs are here and prepared to speak to the points you made concerning the value of the programs. I think to sum it up from my level, the purpose of these programs, outside of caring for the national resources we have in our trust, is to help people in this valley help themselves, and that is how we have made a lot of progress. We don't just go out and give farmers equipment to fight erosion in west Tennessee—we teach them how to plant with no-till planters and show them how to attack the problem themselves. That way, they are not dependent on the Federal Government for continued support. They know how to take care of their own problems. I think, summing it up, TVA helps the people help themselves.

Mr. Willis, you may want to add something.

Mr. WILLIS. Senator Sasser, we would be very pleased to present for the record a summary of these appropriation programs and what we believe they mean to the valley and to the Nation. We have had a good 50 years' experience in doing this, such as the development of the National Fertilizer Development Center. That program has great meaning to the farmers, not only to the valley, but to the Nation, in developing new fertilizer processes and uses of agricultural processes. And we would be very happy to supply additional information for the record.

Chairman HATFIELD. Will you excuse me, please, gentlemen.

[The information follows:]

MISSION OF TENNESSEE VALLEY AUTHORITY

The mission of the Tennessee Valley Authority is to foster economic opportunity and wise management of natural resources for the benefit of the region's people, and to demonstrate to the Nation and the world innovative technologies and management in energy, fertilizer, and resource development

By following the precept of helping those who are willing to help themselves, TVA can see its resources achieve the kind of direct results that build on the region's strengths without fostering a lingering dependency on TVA. In many instances the valley's achievements supported by TVA are equally beneficial to the Nation as a whole.

On the basis of this philosophy, TVA in recent years has focused its efforts on helping communities strengthen their local economies and provide jobs in the private sector. TVA provides a variety of technical assistance and information that assists local people overcome barriers to economic growth. However, this help is dependent upon local initiative and financial commitments to sustain the effort after TVA's initial assistance. There is no expectation of massive infusion of Federal support as was the practice in earlier economic development programs. In fact, TVA's approach provides a model in how to apply appropriately and efficiently a small number of Federal dollars in initiating the difficult process of sustained economic development at the local level with private-sector investments making up the greatest share of the cost. TVA's recent efforts have helped local people pump new life into decaying downtown business districts, recapture a spirit of community self-confidence and direction, develop cooperative business enterprises, and avoid the economic losses of recurring floods, among many other self-help endeavors. Assistance is in response to specific needs, not generalized regional plans.

TVA's responsibilities in the areas of power generation, river and land resource management, and fertilizer development have required the development of skills in economic analysis; chemical, biological, and physical sciences; land-use planning; engineering, design, and construction; financial management; and procurement. The data and judgment of 50 years of experience in regional development have been accumulated. TVA also brings 50 years' tradition of deploying these resources with minimum cost, manpower, time, and redtape. This is TVA's established record. This is what TVA is uniquely prepared to deliver at a time when all levels of government are challenged to meet their responsibilities with fewer resources.

The implementation of TVA's responsibilities has also resulted in the acquisition of tremendous physical resources—land, buildings, locks and dams, generating stations, roads, recreation facilities, laboratories, and other real property. TVA's programs are directed at the proper maintenance and use—stewardship—of these resources. All of this property—especially the land—is regarded by TVA as an asset of the American people entrusted to TVA for property care and use. This philosophy of stewardship—combined with TVA's unique range of capabilities and knowledge—makes possible an approach that fully uses these resources for the benefit of the valley and the Nation today while preserving and enhancing their value to future generations.

TVA fertilizer research and technology puts food on American tables and contributes substantially to fiber production. It helps farmers produce more efficiently, thus holding down food and fiber costs for consumers, and it helps supply agricultural products for export.

TVA coordinates the delivery of its $119.5 million 1983 budget program through the following major categories of activity:

Natural resources development ($62.4 million)—Includes reservoir system operations, with emphasis on dam maintenance and the continued construction of Pickwick Lock; water resources programs to correct inadequate dissolved oxygen levels in reservoir releases and pollution of waterways, and promote environmentally and economically compatible development along tributaries; proper management of land and forest resources to insure an adequate supply for biomass and wood products and to enhance recreation; resource management and support to improve techniques for properly managing the regional air resource and for heightening public awareness of environmental issues; and Land Between the Lakes, a national demonstration of multipurpose resource management and environmental energy education.

Economic and community resources ($13.4 million)—Presents two complementary programs to stimulate the region's economic and social growth: economic resources—to encourage a diversity of high-wage job opportunities in the private sector and a productive labor force, and community resources—to help communities plan sensibly for their economic future without a continuing dependency on outside assistance.

Agricultural resources development ($3.8 million)—Continues its major effort to preserve watershed land resources in the western valley and to help small farms become an economically viable part of valley agriculture through family farms, fertilizer trials and demonstrations, introducing high-income enterprises on small farms, market development, preserving farmland production, program evaluation and analysis, and agricultural waste and energy applications.

National fertilizer development ($36.8 million)—Includes continued progress on the ammonia-from-coal technology; fertilizer research and development, especially on efforts to improve the efficiency of nitrogen fertilizers and conserve resources and energy in phosphate processing; introduction of new fertilizers into the marketplace; and hardwood fuels research that will expand demand for an underutilized resource and provide a substitute for increasingly expensive nonrenewable resources.

SOIL EROSION PROGRAM

Senator SASSER [presiding]. Mr. Chairman, how much have you included in this budget for the soil erosion program? This has been a very successful program in the western part of Tennessee. You have been working down there with the Soil Conservation Service and their watershed activities. How much money do you have in this budget for soil erosion?

Mr. DEAN. $387,000 for fiscal year 1983.

Senator SASSER. How much did TVA originally request from OMB for soil erosion activities?

Mr. WILLIS. I will ask Dr. Bond.

Mr. BOND. We requested $4.8 million for agricultural resource development programs and finally received $3.7 million. OMB did not identify the specific cuts that should be made to accommodate the lower amount. Due to its priority importance, TVA elected to protect our soil erosion control programs from the overall cuts at the expense of other important agricultural development activities, including resource management and rapid adjustment farms, market development, and activities with low-income families such as home vegetable garden demonstrations and cash crops for youth. Since the original request was constrained by the OMB planning ceiling, even though the soil erosion program was not reduced, it does not meet our capability for the program.

Mr. DAVID FREEMAN. Mr. Chairman, I think the record should show we are constrained in the amounts of moneys that we requested of OMB, because we are cooperating with the administration's budgetary stringency. Therefore, our requests to OMB do not reflect the capability or the need of this or other programs.

Senator SASSER. In other words, TVA could accomplish much more in the field of soil erosion if they could secure the adequate funding from OMB to carry out the soil erosion program in its entirety?

Mr. DAVID FREEMAN. From OMB and the Congress.

Senator SASSER. I don't need to tell the Chairman and the two Directors what a problem soil erosion is in western Tennessee.

Mr. DEAN. Shocking, isn't it.

Senator SASSER. Water coming through there is just washing soil away by the hundreds of thousands of tons, as you know. I think it is unfortunate that OMB has not seen fit to give TVA the funds to fulfill its capability in the field of soil erosion.

DEFERRAL OF NUCLEAR PLANTS

Let me move back, if I may, to the question of deferral of the nuclear plants. The Chairman indicated that this was a very difficult proposition for the board, very difficult proposition for TVA management. I opposed the deferrals of the nuclear plants because I, frankly, felt that TVA could sell excess power that is generated to outside utilities.

Last year, work was deferred at the Phipps Bend nuclear plant in upper Tennessee, and several thousand workers were laid off, and the ratepayers are having to pay $65 million a year just for this one unit.

TVA stopped work at Phipps Bend because your most recent low forecast indicated you would be generating more electricity than the TVA system needed, and you were unable to sell the excess electrical power that had been generated.

Here is my concern, gentlemen. Only 50 miles away from the Phipps Bend plant, the Appalachian Power Co. has embarked on a feasibility study on a new $2.5 billion pump storage facility, and Appalachian Power officials say the additional power for the facility is needed. In early January, the Federal Energy Regulatory Commission voted to give Appalachian Power the go-ahead to conduct a feasibility study for the new generating facility. So we have, on the one hand, TVA closing down Phipps Bend, 3,000 people being put out of work creating a major economic dislocation in the area, and I don't think there is any disagreement that is a major economic dislocation, whereas only 50 miles away, the Appalachian Power Co. is planning to build a major new generating facility.

The question I have is, Why didn't TVA explore more thoroughly the possibility of exchanging power with Appalachian Power?

POWER EXCHANGES

Mr. Dean. We have an exchange agreement with that company now. There is a lot of difference between a pump storage plant, which is used for peak loads, and nuclear plant which is used for base load. There is a lot of difference in the way they are used on the system. We do have exchange agreements with the companies to the north. We exchange power almost every day.

Mr. Willis. Yes; we do have an exchange agreement with Appalachian Power. Also, I agree that there is quite a difference in base load plant and nuclear. But we do have opportunities and do share power with Appalachian and have an interconnection.

Senator Sasser. I understand there is a difference between the facility that Appalachian Power is contemplating to build and that is used for peak-load needs. It just seems strange to me they would be investing $2.5 billion to build a facility over there to handle their peak loads where 50 miles away we are shutting down a nuclear plant because we say we can't use the electrical power.

Let me take this opportunity to commend the chairman of the board for his vote against deferring work on Yellow Creek and at Hartsville. As I said earlier, I opposed the deferrals and believe in the future they may very well stand as a monument to management failure and, I think, Mr. Chairman, your suggestions regarding an electric power pool as an alternative for these deferrals was visionary and deserves consideration at the highest levels of government.

We see other electrical generating, other power companies turning away now from building additional capacity. At some point—this recession is not going to last forever, I hope—at some point the economy is going to pick up, start moving out again, and there is going to be more and more need for electrical energy. The elasticity of demand for electrical energy can't just go on and on. At some point, I think, there has to be increased demand as we increase our economic activities.

I might say that in February 1979, I held hearings in Knoxville on TVA's demand forecast at that time, and we talked about the status of the construction program and the need for raising the debt ceiling. This is when TVA wanted to raise the debt ceiling for bond indebtedness up to $30 billion. At those hearings, I questioned TVA's demand forecast. I thought it was too high. I even suggested that perhaps at this point, over 3 years ago, maybe we ought to defer some nuclear plants. Well, now on down the line, with the expenditure of an additional $1.5 billion at Phipps Bend, Hartsville, and Yellow Creek, the majority of the board is in agreement. But the problem is, we have got another $1.5 billion of the ratepayers' money that has gone into these various nuclear plants that now are just going to stand there as white elephants.

Some say that TVA shouldn't be blamed for this, that other electrical companies, other utilities have been just as far off in their load forecasting as TVA has been. Have there been other facilities as far off as TVA in their forecast of electrical energy needs and in their construction programs? Can you name one?

Mr. WILLIS. There have been numerous other cancellations or deferrals of nuclear plants around the country, as everybody is quite aware of. I am not familiar with very many that have been as far into construction. We will provide for the record all of the ones that have been cancelled, their status and construction.

Senator SASSER. Will you do that, please, Mr. Willis, and I have got some other questions regarding the deferrals which I want to place in the record and ask you to respond at your earliest convenience.

[The information follows:]

The following table summarizes TVA's current information about nuclear generating unit construction deferrals and cancellations. Several of the units which are listed as "deferred" may already have been canceled.

Deferrals and Cancellations of U.S Nuclear Units

Power System	Unit	Megawatt Capacity	Percent Complete	Deferred	Canceled	Deferral Decision Pending
Boston Edison Co.	Pilgrim 2	1,150	0	x		
Carolina P&L Co.	Harris 3	900	1		x	
	Harris 4	900	1		x	
Commonwealth Edison Co.	Carroll Co. 1	1,120	0	x		
	Carroll Co. 2	1,120	0	x		
Duke Power Co.	Perkins 1	1,280	0	x		
	Perkins 2	1,280	0	x		
	Perkins 3	1,280	0	x		
	Cherokee 1	1,280	18	x		
	Cherokee 2	1,280	0	x		
	Cherokee 3	1,280	0	x		
Georgia Power Company	Vogtle 2	1,100	10			x
Houston L&P Co.	South Texas Project 2	1,250	23			x
Illinois Power Co.	Clinton 2	950	0	x		
Iowa P&L Co.	Central Iowa	1,270	0	x		
Niagara Mohawk Power Corp.	Nine Mile Point 2	1,080	38			x
Mississippi P&L Co.	Grand Gulf 2	1,250	22			x
Philadelphia Electric Co.	Limerick 2	1,055	28			x
Public Service of Indiana	Marble Hill 2	1,130	11			x
Public Service of New Hampshire	Seabrooke 2	1,150	8			x
Public Service Electric & Gas Co.	Hope Creek 2	1,070	18		x	
Union Electric Co.	Calloway 1	1,150	80	x		
	Calloway 2	1,150	1		x	
Virginia Electric & Power Co.	North Anna 3	907	9			x
Washington Public Power Supply System	WNP-4	1,250	24	x		
	WNP-5	1,240	14	x		

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NEED FOR INDEPENDENT INSPECTOR GENERAL

Senator SASSER. Let me get to the question now of inspector general for TVA. Last year during these hearings, I asked TVA, I asked the Board to voluntarily create an independent office of inspector general to eliminate, or help eliminate, what were complaints at that time of waste, abuse, mismanagement in certain areas and, in some cases, of outright fault.

In August, TVA created an audit review group, but the General Manager, Mr. Willis, indicated that the audit review group would not function as an independent inspector general. Following the General Manager's comments, I asked the General Accounting Office to look at TVA's internal audit procedures to see if they were adequate and assess the need for a separate and independent inspector general. We have a separate, independent inspector general for many, many other departments of government and it has worked, gentlemen, quite frankly, very, very well.

Well, apparently just sending the General Accounting Office team to look at the question was to get some more movement and action. In January, I was informed TVA was establishing an Office of Internal Audit and Evaluation which would have direct access to the Board of TVA. Well, it has now taken TVA 2 months to organize this Office. I don't want to be mistaken in my position in this matter. While I consider the Office of Audit and Evaluation to be a step in the right direction, it still falls short of an independent inspector general that reports directly to the Board instead of merely having access to the Board of Directors.

Last August, when you created the audit review group, I was willing to give TVA the benefit of the doubt that you were acting in good faith, only to later learn that the audit review group was apparently impotent and ineffective.

So my question to you, Mr. Chairman, is, Why should we be any more encouraged by this new Office of Internal Audit and Evaluation if we didn't get any more movement out of the previous formation?

Mr. DEAN. There has been some misunderstanding there, Senator. The audit review group actually has on it some of the very top people in the agency. It is chaired by the General Manager, our General Counsel, Mr. Sanger, is on that group; Mr. Stewart, Assistant General Manager, is on that group, among others.

Mr. WILLIS. The Comptroller is on it, and the Director of Public Safety.

Mr. DEAN. It meets at least quarterly and the job of that group is to provide general oversight and followup to all of TVA's auditing, evaluation, employee misconduct, and fraud investigations. We have just established a new Office of Audit and Evaluation, as recommended by GAO and our independent consulting firm, Coopers & Lybrand. It combines all of TVA's auditing, evaluation, and management improvement efforts in one place. These things grew out of Senate oversight hearings which were held before I came on board, so I had nothing to do with it except that the Senate Environment and Public Works Committee and this committee requested that we consider this matter and take some action and report back. The audit review group functions, in addition to the new Office of Audit and Evaluation which, in turn, reports to the General Manager on day-to-day matters, but it also has direct access to the Board of Directors, as does the General Counsel who is in charge of employee misconduct and fraud investigations.

There has been no effort to drag our feet on this request which was made by the U.S. Senate. We believe TVA has a solid and reliable system. We don't ignore that type of request. In fact, we think we have responded adequately. So far I have heard nothing from the committee, the oversight committee, to the contrary.

Senator SASSER. Mr. Chairman, I am aware that most of this took place before you came on Board as chairman of the board of TVA.

Mr. DEAN. We set this committee up, this audit review group, last summer and the Office of Audit and Evaluation last month.

Senator SASSER. But I will have to say to you, in all candor, I am really very skeptical of the new Office of Internal Audit and Evaluation. And, frankly, I think the burden of proof is going to be on TVA to prove that this new group will function in an independent manner, that it will function in an effective manner. I would like to suggest, in fact, ask the TVA today to prepare a formal audit plan on followup procedure and present that plan to this committee in 2 weeks before we mark up this bill. If I find prior to the committee marking up the bill that TVA is, in the judgment of this committee, failing to act expeditiously in this matter, I am going to propose a minimum to arbitrarily provide funding for a separate, independent inspector general. I think we have been on this project now for over a year—almost a year. In fact, maybe over a year. So I think the burden now is on the Board to come forward and present a plan to indicate that this new group will function to provide independent oversight of TVA and its operations.

Mr. RICHARD FREEMAN. I would like to speak to the philosophy of that for a moment. It is very important to remember what is the objective of the management of TVA and the Board. That objective is to manage effectively. In dealing with audit matters, which I have dealt with in my business career for many, many years, it is extremely important that the auditors have independence, yes, but that the managers continue to have the power that goes with their responsibility. In designing the Office of Audit and Evaluation, which was carefully reviewed and structured in the light of the recommendations by Coopers & Lybrand—and a matter with which I personally spent a lot of time—we structured that Office in such a way that we did not take away the power from managers who have the responsibility. We structured it that way and still have an effective audit function.

That is a very delicate balance and I think we have achieved it. An inspector general kind of a device destroys that very delicate balance, and I would vigorously urge you not to propose an inspector general for TVA if you expect us to be effectively managed.

Senator SASSER. Mr. Freeman, you can certainly discourage me from proposing an office of inspector general if you will convince me that the Tennessee Valley Authority is being effectively managed.

Mr. RICHARD FREEMAN. I would be delighted——

Senator SASSER. That is all I ask.

Mr. RICHARD FREEMAN. I will be delighted to undertake that challenge. I think I can demonstrate that. Three years ago, we began putting in place a number of devices to strengthen and improve the management of this agency. Many of those are beginning to bear real fruit. The Office of Power is now becoming a most effective and efficient operation. They have put in place the kind of controls that are not urged through an inspector general. These effective, sophisticated controls are paying off. These controls and devices are now being put in place throughout TVA. It is very difficult to get PR on devices like that. They are not glamorous. They just work, and we are concentrating on things that are not glamorous but that work.

It is patient, hard digging to get that done. It doesn't make good headlines, but it's going to work, and I would be delighted to have the opportunity to persuade you that we are doing those things and that they are and will continue to pay off in big, big dollars.

Senator SASSER. I am certainly open to persuasion and, frankly, I would be delighted to be persuaded.

Mr. RICHARD FREEMAN. Good.

Senator SASSER. I have some other questions on TVA's internal audit procedures which I am going to submit for the record.

EMPLOYMENT RELATIONS

Let me just say a word now, if I may, about employment relations. I and other Members of the Congress have been contacted on a number of occasions by Mr. Jim Eickman, Mr. Charles Harris, and other TVA employees concerning management issues of TVA. I think it is fair to say that you have, in my judgment, a serious morale problem with many of your employees.

First, you are reducing construction employment by halting construction at several powerplant locations. Second, last year TVA attempted to give several top TVA management officials raises of as much as 70 percent, and we fought that battle already, while at the same time forcing 17,500 white-collar employees to accept a meager raise of 3.7 percent, much less than the cost-of-living increase.

These two factors alone have created a serious situation between TVA management and its employees.

I have received a letter dated October 13, 1981, from Mr. Jim Eickman. Mr. Eickman's letter outlines his concerns and the concerns of thousands of employees that he represents. The concern, simply stated, is that TVA is not bargaining in good faith with its employees. In fact, the letter de-tails that at one point in the negotiations of last year, TVA management threatened to cancel the 31-year-old collective-bargaining agreement.

Mr. Eickman has asked that a congressional investigation be initiated to investigate TVA employment policies.

Now, I would hope that TVA would be able to work out any differences that might exist with its employees without Con-gress having to get involved in worker-management relations. We have no business getting involved in that, don't want to get involved in it, and don't want to be pulled into it. So I would like to ask the TVA board today to open its doors to these employees and those other representatives of the TVA employees who feel that TVA management policies are not in the best interest of TVA employees.

It appears to me it is simply good business, a good business practice, to try to minimize the differences between management and employees whenever and wherever you can and wherever they exist. So I would ask you to respond for the record to some of the criticisms that these gentlemen have raised against TVA management, and I would like to ask your commitment to hold a meeting with employee representatives in an effort to work out any differences that might exist.

Mr. Chairman, would you like to respond to the criticisms that have been directed to TVA management?

Mr. RICHARD FREEMAN. We are about to begin our negotiating process.

The collective-bargaining process has already begun, and they will be carried on in the next several weeks and it will come to fruition.

Mr. DAVID FREEMAN. We will be glad to supply for the record the responses to the charges they made, but the collective-bargaining process is in motion; we have our representatives and that process, which goes on each year, will continue. But if they have made some charges to you, Senator, and you want the management's response to it, of course, we will be glad to supply those.

[The information follows:]

As you know, TVA has a long history of successful collective bargaining relationships with its employees. Our recognition of the Salary Policy Employee Panel, with which Mr. Eichman became involved in 1980, goes back to 1943. We have pledged to continue this history of recognition and collective bargaining that has served both parties so well. We intend to engage in collective bargaining this year as we have in the past with the intent to resolve issues, while responsibly serving the interests of TVA and all of its employees.

In 1981 TVA completed negotiations with the panel. These negotiations involved some difficult issues which had not been timely resolved in prior years. Over the years, some salaries and a number of practices had evolved which were inconsistent with prevailing practices of other firms and agencies in the region. The collective-bargaining agreement provides that TVA will pay its salary policy employees at the prevailing rate. TVA management had attempted to bring its salaries and other negotiated practices in line with the prevailing practices in the vicinity through negotiations extending over several years. As indicated, these efforts had not been resolved by agreement. TVA was of the view that the proper management required that the problems be corrected. We were encouraged to do so by individual Members of Congress and others. TVA took the position in the 1981 negotiations that the problems could not continue to remain unresolved. We believe that the results of those negotiations bring TVA's policies and practices with respect to pay and most benefits for employees represented by the Salary Policy Employee Panel more closely in line with prevailing practice. We also believe that the results were fair and equitable to all affected employees. The request in the letter is simply one that a congressional committee undertake to provide pay and other benefits to employees in excess of the governing standards.

The board of directors is well informed on issues that arise during negotiations and approves any revised pay rates and other matters that are agreed to during negotiations at open board meetings conducted in accordaince with the Government in the Sunshine Act. However, responsibility for the day-to-day conduct of negotiations has been delegated to others within TVA. In addition, frequent meetings are held throughout the year between TVA managers and panel representatives to plan future negotiations and implement past agreements. The board feels that it is important that effective working relationships be developed between TVA managers with responsibilities in the labor relations area and employee representatives. The board is available to handle unresolved disputes; however, we are careful not to undermine or encourage employee representatives to bypass these important working relationships.

Senator SASSER. If you do that, it would be very helpful to us. I think it would be very helpful to the committee to get responses of management to these charges at this juncture. We know what the charges are. We don't know what the responses are.

Mr. DEAN. Senator, the general public perceives TVA to be a very good place to work. We have more applications on file now than employees.

Senator SASSER. Given the economic conditions today, that is not unusual. That is happening just about everywhere in the State.

Mr. RICHARD FREEMAN. It has been true before present economic circumstances.

Senator SASSER. Mr. Chairman, we have a vote on the floor. I have 5 minutes to get up there and vote. I will do that. I will be right back and try to conclude this expeditiously.

[A brief recess was taken.]

TVA APPROPRIATED PROGRAMS

Senator SASSER. The committee will be in order.

Mr. Chairman, I would like to go back for just a moment to your appropriated program. I asked you a moment ago to give us a rundown of what the benefits of this appropriated program is for the American taxpayers and certainly for our own region of the country.

I would like to go back to that question now and see if we couldn't get a more complete answer on that. I want to get it in the record from either you or either one of your fellow Directors.

Mr. DAVID FREEMAN. I have been struggling with the content of TVA's appropriated programs—Dick and I and others—for almost 4 years. If I might, I would like to summarize where I think TVA is in its nonpower program.

When I came on the board, the efforts were quite scattered, quite frankly, and I believe it was described to me by many people that TVA seemed to be trying to do a little bit of everything and accomplishing very little in particular fields. We have now focused those efforts on investments to create jobs. This means technical assistance to communities, and sharply defined efforts in the community development area; that is, a demonstration of how a Government agency, in working at the grassroots with State and local officials and private citizens, can take technical assistance and translate it into job-creating efforts.

We have opened our eyes to the soil erosion in the western part of the area and launched an effort there. We have accelerated the efforts at Muscle Shoals to create fertilizers that are more energy efficient, more cost effective in an era of high energy costs and growing food shortage all over the world.

Our programs in the field of recreation have been made it much more cost effective. We are now doing the things that we need to do in a way that are not nearly as scattered and are much more focused. We charge user fees where possible and encourage commercial development of TVA recreational areas.

We have concentrated on a water quality problem of low dissolved oxygen content that TVA dams ad reservoirs have helped cause in the Tennessee River basin. We are trying through a research program to find a way to remedy that problem. This is a lesson the entire Nation can use to increase the viability of the fish resource and to cut down the cost of water pollution control for industries.

I think our work in the resource field—and the resources include the air, the water, the forests, and the land—are paying the most dividends for the valley and are providing a model for the Nation.

If you consider parts of the Tennessee Valley—large parts of it—to be small, sort of underdeveloped nations, we are providing technical assistance that is a very different approach from a program of simply throwing money at the problem, on the one hand, or doing nothing, on the other hand. It is carefully calculated to meet the needs of the 1980's and 1990's—to help parts of this Nation that have been passed by.

Quite frankly, Mr. Chairman, the Chase Manhattan Bank doesn't have people out in east rural Tennessee areas looking for ways to invest money.

Senator SASSER. The folks couldn't afford the interest rates anyway, Mr. Freeman.

Mr. DAVID FREEMAN. That is the reason they are not there, one reason, and they won't be there when the interest rates come down.

Our experience is that every region of the country has had some catalyst to get it started, and TVA's programs, at this stage, are helping parts of the valley that have not grown—that are economically depressed—to get started.

I think the efforts that we have underway deserve the support of the Congress as a pattern that the rest of the Nation might very well want to follow. TVA is a regional development agency. The original concept of TVA was not as a power agency primarily, but as a regional development agency.

The purpose of TVA was to look at all the natural resources and look at the human resources, then take action to spur development. We believe we are doing just that, doing it, if I might say so, for 10 cents on the dollar, a demonstration of what could be done.

We hope that this committee will support our efforts and help us to disseminate the results that TVA is a living laboratory.

Senator SASSER. I think that is a very helpful statement, Mr. Freeman, and I think TVA in this time of economic downturn in our area, we find that Tennessee and many of the other Sunbelt States, at least in our region, are running a higher unemployment rate than the national average. Some economists are predicting when recovery does come, and we all hope it comes quickly, that we are going to recover much slower in the Tennessee Valley area than many other sections of the country.

I think TVA's role outside purely of generating power, has become as important, and perhaps more important, in the next few years since the 1930's and since the 1940's. That is one reason that, quite frankly, I am distressed that you have been forced to take some of the cuts you have taken in your appropriated budget. I am relieved that the cuts aren't more draconian than we have been led to believe. They are really going to be worse than they are. I think they are less through the good efforts of you gentlemen here and through the good efforts of some very influential members of our delegation of the Tennessee Valley.

But I want to assure you of my support to appropriate the budget in the works because I think it is important, I think it is urgent, and I think probably through this particular stretch they are probably more urgent than any other time.

Gentlemen, I have got many other questions here. The hour is late. I will submit these for the record. I am told that Senator Huddleston also has some questions. Without objection, they will be submitted for the record.

GAO OVERSIGHT OF TVA ACTIVITIES

Before closing the hearing, I would like to take just a moment to say a word about the General Accounting Office. Frankly, in my view, the GAO has done a good job over the years in exercising some degree of oversight of TVA and giving the rest of us here in the Congress a more or less independent evaluation of many of TVA's operations.

Now, I am concerned that sometimes TVA may not be as cooperative with GAO as perhaps should be the case. I think we need to remember that the General Accounting Office is an arm of the Congress, and when GAO is seeking information from the Tennessee Valley Authority or any Government agency, it is the same, really, as Congress asking for that information. So I suspect myself, or perhaps other Members of the Congress, in the future will be asking GAO to conduct, perhaps, additional studies on the TVA's operation.

So I would hope that the board would admonish the TVA staff to give the General Accounting Office full and complete cooperation. They have gotten it in many areas inside TVA. In other areas, there has been a feeling that perhaps the staff has not been as forthcoming as it could have been. I don't think we have got any secrets here. I think we are all after the same thing.

Mr. DEAN. Senator, it is our intention to be forthcoming in our dealings with GAO. If there has been any effort to withhold information from GAO, the Directors have no knowledge of it.

Mr. RICHARD FREEMAN. I think the problem, Senator, may be the reverse. We have a good example in the fuel leasing report where the report is factually in error and the conclusions just don't make any sense because GAO didn't come back and seek information from TVA. So what we get is a headline that is very much in error, and we don't have the opportunity to respond.

If the General Accounting Office would come back to us and have an interview, as the practice once was, I think we could have advised them of the inaccuracy of their statements and it wouldn't have been as embarrassing to them as it eventually will be when we point out their errors.

Unfortunately, the public will probably never read our response. That is the unfortunate part about it.

Senator SASSER. I am going to give you an opportunity to respond to the General Accounting Office, because in my prepared questions here that I am submitting for the record, I ask for responses to the various General Accounting Office——

Mr. RICHARD FREEMAN. That comes a week later. By then, it gets lost in the shuffle.

Senator SASSER. Mr. Freeman, if you want to, you can call a press conference on your own.

Mr. RICHARD FREEMAN. No; I don't like to deal that way.

Senator SASSER. You have the most competent public information people in this country.

Mr. RICHARD FREEMAN. Shall we ask him to stand?

Senator SASSER. I happen to know that of my own knowledge. If you wish to confront the General Accounting Office, you have the troops to do it.

Mr. RICHARD FREEMAN. Senator, my point is that I would rather not have that kind of confrontation with the General Accounting Office. We try to be cooperative and helpful at all times. If they had come to us and given us an opportunity to point out the errors before the report was issued, then there would have been no occasion for any kind of press problems.

Mr. DAVID FREEMAN. You can be very helpful to us. You correctly asked us to be sure we cooperate 100 percent with the GAO. That is a very legitimate request, and we, of course, will honor it. We are simply asking your help in asking the GAO, at least in work done at your initiative, to fully solicit TVA's views before they come to you with findings and recommendations. That will be more helpful to you if they have fully explored the information that we have available before they come to you with their recommendations.

I think that is in the interest of getting the best answer. We will be sure that they get full cooperation from us, and simply make the request that the reverse of that be true.

Senator SASSER. I am encouraged to hear that. That is a healthy note on which to end this hearing. Just let me say, Mr. Chairman, to you and to your colleagues on the Board, that we have had disagreements over the policy of the TVA. I suspect that we will continue to have some disagreements in the future. We have also had many agreements. I suspect that we will continue to have many, many agreements in the future.

I just want to say to you that simply because there are disagreements over TVA policy, that does not mean that this Senator does not have a personal respect and regard for each member of the TVA Board.

ADDITIONAL PREPARED QUESTIONS FOR THE RECORD

On that note, I will place the additional questions from Senator Hatfield, Senator Stennis, and Senator Huddleston in the record at this point, along with a number of questions I have for your response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR HATFIELD

PHASEOUT AND TRANSFER OF TVA ACTIVITIES

Question: On page 2 of your prepared statement you state that "TVA programs that have achieved their objectives are routinely phased out or transferred to others for implementation." In discussing economic and community resources programs you indicate that "programs no longer needed are eliminated or turned over to others." Can you give the Committee some examples of programs which have been phased out or transferred?

Answer: TVA has redirected its economic and community development programs over the past couple of years, phasing out activities that either have been taken over by other government agencies or private groups, or are of such a lesser priority that they are no longer appropriate. Specifically, TVA has recently eliminated its efforts related to rural health care, initiatives intended to provide assistance to older Americans, comprehensive community energy planning demonstrations, entry-level job training, and certain types of regional planning assistance. All remaining program activities have been streamlined and made more efficient as a result of a continuous internal evaluation process.

Further examples can also be found within our natural resources program. Recent TVA demonstrations in community fishing facilities and lake installations of fish attractors have been deleted by TVA but with continued support and maintenance by State and local authorities. The operation and expansion of the Bear Creek environmental education project has been assumed by regional schools. The wildlife reintroduction program for Canadian geese is now carried on by State agencies. TVA's community recreation assistance program has been phased out in 1982, as forestry research in the genetic improvement of trees was earlier.

COORDINATION WITH ARC

Question: In regard to the economic and community program, what procedures or practices have you developed with ARC to ensure that there is not duplication in many of these community development programs?

Answer: TVA has established both informal and formal means of ensuring the dialogue with ARC necessary to avoid duplication of economic and community development programs. Our formal relationship is outlined in a continuing letter of agreement between TVA and ARC. Informally, the two Agencies maintain staff-to-staff communications which, as appropriate, involve State agencies and local leaders from communities where assistance is either ongoing or proposed. This way of doing business promotes a functional partnership and yields a common understanding of respective roles and responsibilities each group or agency contributes to the particular economic development project. Rather than duplicative, the roles are complementary, each contributor furnishing a key element necessary to successfully bring about further growth and development.

Question: In particular, do you work with ARC to design, for example local development strategies in targeted areas? How does your role differ from that of the ARC?

Answer: TVA's primary role in this partnership involves the provision of a broad spectrum of technical expertise in related areas not available elsewhere. The economic and community resources program provides not only assistance from within its program areas, but brokers expertise from throughout TVA as well as from other Federal Agencies and private groups, as necessary. TVA is not in the business of grantsmanship but recognizes the critical importance of capital funds in rural economic development and works to stimulate both private and public investment projects. ARC's principal role in the partnership, by contrast, is to make the necessary grants (capital dollars) available.

This functional relationship between TVA and ARC was formalized in 1980 through a letter of agreement. This agreement called for cooperative efforts between the two Agencies designed to maximize the positive impacts of public investments for economic and industrial development and other projects within the Valley region. This agreement reflected the traditional TVA/ARC relationship, ARC furnishing the necessary capital and TVA providing the technical expertise to actually be "on the ground" with local leaders and assist in the implementation of specific projects.

PROGRAM COORDINATION WITH THE DEPARTMENTS OF AGRICULTURE AND INTERIOR

Question: Please explain for the record how your agricultural, forestry, and fish and wildlife programs are coordinated with USDA programs such as Agricultural Extension Service and Soil and Conservation, and the Interior Department programs.

Answer: TVA conducted its agricultural programs in coordination with USDA even before the signing of a formal memorandum of understanding in the mid-1960s. We also have cooperative agreements with the agricultural universities which are renegotiated every five years and require annual workplans and budgets. We have a memorandum of understanding with the Department of the Interior for the conduct of fertilizer demonstrations on Bureau of Reclamation projects and Indian lands.

Our respective roles in conducting fertilizer demonstrations are clear. TVA provides staff assistance for program planning and evaluation and provides fertilizers and other materials, and the Extension Service is responsible for working directly with the farmers.

Farm demonstrations aimed at solving problems of soil erosion incorporate the soil conservation recommendations of Soil Conservation Service (SCS). No duplication occurs with other Federal or State agencies. TVA's forestry program is coordinated with the U.S. Department of Agriculture Cooperative Extension Service through the Regional Extension Forester and State extension foresters. Coordination with the SCS is through State conservationists and with district soil conservationists who have a special need for TVA expertise.

TVA includes the U.S. Department of the Interior (USDI) regional and area offices in its lands planning activities. Through our Regional Natural Heritage Project, we have letters of agreement with USDI field offices within the TVA region for data exchange concerning location and status of threatened and endangered species. TVA cooperates with the U.S. Fish and Wildlife Service (USF&WS) via shared cost agreements for the operation of dewatering units, surface mine reclamation efforts, endangered wildlife restoration programs, and the habitat evaluation program on the Columbia Dam project. Appropriate permits are obtained from USF&WS for fishery management activities and investigations.

TVA's aquaculture activities are coordinated with both USDA and USDI at the national level through participation in the Joint Subcommittee on Aquaculture, and on a regional level through the S-168 committee. Coordination is carried out at State and local levels through biologists with the State Soil Conservation Services.

NUCLEAR UNIT DEFERRAL

Question: Can you comment on the TVA growth/demand projections and what factors have effected the apparent change from your earlier estimates?

Answer: The current range of TVA load forecasts is lower than the previous forecasts for three reasons. First, the Department of Energy uranium enrichment requirements have been significantly reduced. Second, the previous forecasts included significantly higher oil and natural gas prices. The present oil glut and softening of world oil prices have resulted in lower price forecasts for both oil and natural gas and correspondingly less substitution into electricity. Third, the Bureau of Economic Analysis, U.S. Department of Commerce, has made some significant revisions in historical economic data for the United States and the TVA region. For the TVA region, data on employment and wage earnings have been revised upward for the latter half of the 1970s. These revisions have had a significant impact on the actual level of economic growth in the TVA region as reflected by employment and estimates of Gross Regional Product (GRP). For example, prior to data revisions, GRP was estimated to be growing at 3.3 percent per year from 1970 to 1980. The data revisions increased the growth rate in GRP to 3.8 percent per year from 1970 to 1980.

This revised estimate of the growth rate in economic activity has resulted in a reevaluation of the relationship between the estimate of economic activity and the known consumption of electricity. The revised data show that growth in electricity consumption is not as closely tied to growth in economic activity as was previously indicated. The "decoupling" of electricity consumption from growth in economic activity has had significant impacts on the load forecast as measured by kWh sales per dollar of GRP or personal income.

Question: Please elaborate on the reasons for the decision to defer the two nuclear units.

Answer: There are three main reasons for deferring. First, our present judgment is that existing generating facilities and the nuclear plants which are now under construction will provide all the power needed by a robust regional economy into the 1990s. If it turns out that we need more capacity to meet the needs of the late 1990s and into the next century, we will have plenty of lead time to build more capacity--either by restarting these units or by building new coal units or whatever new technology may be available in the future.

Second, the rapid escalation of nuclear construction costs has now wiped out the tremendous cost advantage which nuclear seemed to enjoy over coal. Now we see that significant savings to ratepayers can result from deferring these units. It would cost an additional $8.2 billion just to complete these three units. Avoiding these capital outlays in the 1980s--and the interest payments on them at today's very high rates--will result in rate savings as much as 7 percent in 1990 compared to what they would have been if construction were continued. Some have suggested that 7 percent is a small amount. However, with the alarming deterioration of the competitive advantage in industrial rates which TVA once enjoyed, we simply cannot afford to treat an unnecessary 7 percent increase lightly.

Third, the financial risks of continuing construction greatly outweigh the risks of deferring. This is because the $8.2 billion cost of going ahead--with the concomitant rate burden in 1990--would be a certainty if the Board had decided to continue construction. On the other hand, the projected operating cost advantage of nuclear over coal is not a certainty. Although we fully expect that nuclear units will enjoy an operating cost advantage, due mostly to the lower cost of nuclear fuel, there can be no guarantee that these advantages will be realized.

We should note in this regard that two of the Board members voted for deferral, and Chairman C. H. Dean favored extensive "stretch-outs" of construction and reduction in the rate of investment in these units. Thus, the Board members were not in serious disagreement. Their individual opinions follow.

REMARKS OF RICHARD M. FREEMAN

MARCH 4, 1982

I wish to preface these remarks by expressing my appreciation to the hundreds upon hundreds of people who took the time to respond thoughtfully to our request for views. I think I have read or heard them all. And in particular I wish to thank Joe Merritt and the Trades and Labor Council for their sincere effort to find ways in which TVA and organized labor could improve productivity to tip the economic scales in favor of continuing construction. Joe and the Council served their members well. And many of the changes made in our agreements will also serve our customers well in the future. Equally important, Joe and the Council have pointed out deficiencies in our management of these projects and have pledged to continue their efforts to help us improve productivity, with particular emphasis on operating our power plants efficiently.

With the completion of four more units, at Watts Bar and Bellefonte, TVA will have substantially more power than needed to meet the low forecast, but, more relevant, will have for a period of at least three to four years more power than needed to meet the high forecast if construction at Yellow Creek and Hartsville is continued. I will not dwell on why we have this surplus; certainly, I will not condemn my predecessors who made the decisions to build Yellow Creek and Hartsville.

Even though we may not need the power from these plants, TVA could, of course, continue construction, avoiding the serious disruption to thousands of people, which deferral will bring. For me that disruption, both to people with TVA and to many, many people outside the organization, is not a small matter. I know only too well the suffering deferral can bring, having just recently observed the trauma to our employees and others involved at Phipps Bend when we deferred the second unit there.

But, I also am painfully aware how our customers are suffering from high electric bills and how our competitive rate advantage in attracting and even holding existing industries has been lost over the last several years. It is our nuclear construction program which has been such a large part in forcing TVA to send those high bills. There are thousands of jobs, many more than the 5,000 involved in building these 3 units, which may be lost in this Valley if we continue construction of plants which may not be needed.

Some have said that a maximum of 7-percent difference in rates between deferring and continuing construction is too little to be concerned about. I cannot take that callous view toward low income customers. And it is now clear that a 7-percent difference to an energy intensive industry can be a deciding factor in whether it continues operating in the Valley or elsewhere.

This decision could be made much easier if, as others have suggested, TVA could contract with oil and gas burning utilities in Florida and the southwest to sell them our surplus for a few years.

Well over a year ago, we announced that TVA would try to enter into exchange contracts with utilities burning oil and gas to dispose of surplus power. Since that time, we have vigorously worked to make such arrangements. These efforts have failed. Let me explain why: Unfortunately, TVA does not have direct connections with the oil and gas burning utilities which would like to have our surplus power. And the utilities with direct connections, which would have to wheel our power to the oil and gas burning utilities, are in the same position as TVA--they too have surplus power. Not surprisingly, then, these directly connecting utilities have no interest in wheeling our power to Florida or the southwest. In fact, the Southern Company announced just last week that it was selling large blocks of power to two oil and gas burning utilities. In effect, we are surrounded, and can't get our surplus out.

If, either by legislation or other circumstance, it should someday become possible to exchange surplus power, TVA can restart construction of deferred units. Indeed, if TVA defers the three units in question we would be in a stronger bargaining position with our neighbors.

The dramatic change in demand for electric power gives TVA the opportunity to pause in our construction of the three units at Hartsville and Yellow Creek—spending the absolute minimum—while we carefully watch economic and technological developments.

Possibly more than any time in our history, there is great uncertainty in the shape of this Nation's economic future. I believe that some of the uncertainties may be removed in the next few years. Prudent financial management requires that we take advantage of this opportunity to wait for a clearer picture of the future.

My views are colored by my business background. Continuing construction of these three units is not a good business risk. I must be mindful of the fact that while the Board makes the decision, it is our customers who pay. With billions of dollars involved, I cannot ask our customers to take the many risks of construction, when there is no need to take those risks and when I certainly would not take the risks with my own money.

So, I must come down on the side of deferral. During this pause, the staff should undertake a thorough analysis to compare the merits of smaller coal-fired units at Yellow Creek and other potential sites with the merits of completing these units. We must make maximum use of the time available to us so that TVA can respond quickly and wisely to changes in demand for electric power.

Question: You mention that the lower level of borrowing made possible by the deferral decision will help TVA's financial position. Please explain and quantify that for us.

Answer: If the three units in question had not been deferred, TVA would have incurred higher capital costs and higher fixed costs to amortize that capital investment with little certainty of electric power sales and rates adequate to finance those costs. Thus, TVA would have to borrow the funds (about $3.7 billion over the next eight years) to pay those fixed costs. Current ratepayers would have to pay interest charges associated with these borrowings and rates would increase correspondingly.

Also, with borrowings lower than they otherwise would be and the TVA power program's net income at present levels, the corporation's cash flow and general financial position would be viewed more favorably by the financial community.

Question: What effect will the deferral decision have on rates?

Answer: If high load growth occurs and TVA must restart construction on these units, TVA's ratepayers will have lower rates from 1982 to 1992, with a maximum 3 percent in avoided rate charges in 1990, as a result of deferral of Yellow Creek unit 1 and Hartsville A units 1 and 2. With high load growth, TVA wholesale rates starting in 1993 will be from 2 to 3 percent higher as a result of the deferrals. However, if low load growth occurs, TVA's ratepayers will have lower rates from 1982 to beyond the year 2000, with an avoidance of rate charges of from 6 to 7 percent in 1990.

STATUS OF NUCLEAR POWERPLANT CONSTRUCTION

Question: Please provide for the record a status report on your nuclear power construction program.

Answer: Currently, TVA has four nuclear units in commercial operation, five units under active construction, and eight units in deferred construction status. In January 1982 the status of the units under active construction was as follows: Sequoyah unit 2 was 99 percent complete, Watts Bar Nuclear Plant (two units) was 76 percent complete, and Bellefonte Nuclear Plant (two units) was 72 percent complete.

LAND BETWEEN THE LAKES

Question: You indicate that LBL is the focal point of a billion-dollar tourist industry and brings an estimated $135 million per year in economic benefits. In light of these facts, what efforts have been made to provide local support for the operation and maintenance of the area?

Answer: A considerable effort has been made and is being actively pursued. The funding necessary for even the existing level of activity would be considerably greater but for the support of surrounding communities. For example, several area organizations regularly cosponsor 13 special events at LBL. Support is generally in the form of prize money, awards, publicity, and/or commitment of personnel. These activities are vital to the educational and recreational capability of LBL and attract a broad spectrum of users to the region. Efforts are underway to make all special events totally self-financing and expand the scope of events to develop additional support from a broader base of users.

LBL, in concert with the University of Kentucky extension program, has spearheaded a coordinated approach to regional tourism promotion which should significantly increase visitation to both LBL and the west Kentucky/Tennessee region. In drawing 15 area tourist organizations and their respective budgets together, a potential regional marketing budget in excess of $200,000 will be made available for promotion. Increased area visitation will stimulate economic development of the area and will also help LBL achieve its potential as a demonstration of multiple-use resource management for maximum public educational and recreational benefits.

Operation and maintenance support have been provided by a number of local sources. For example, maintenance assistance has been provided by groups such as off-road vehicle users and horsemen clubs in their designated use areas. Civic organizations have initiated supportive activities such as litter cleanup days. State (Kentucky and Tennessee) garden clubs have offered to help LBL with beautification projects at a number of LBL facilities and entrance points. The Tennessee Conservation League (TCL) has agreed to fund and provide personnel to continue the bald eagle restoration project in the Tennessee portion of LBL. In recent years LBL has made available a portion of Rushing Creek Campground as a retreat for Fort Campbell military recreation. In return, the U.S. Army has provided personnel to assist LBL in various projects.

TVA will continue to develop cooperative projects and agreements with agencies, organizations, and individuals which provide for local support of operations and maintenance of LBL. We do not anticipate that this kind of cooperation can replace the need for Federal support, but we believe it can provide or improve some aspects of LBL programs with less Federal investment.

Question: You indicate that user fees and timber receipts defray about 11 percent of the operating costs of LBL. Please provide a breakdown of the amount of revenues and the level of fees and receipts from timber and the different types of fees over the last 10 years.

Answer: The following table provides a breakdown of actual revenues for fiscal years 1972 through 1981. These are broken down by timber sales, family campgrounds, and group camping.

	In Thousands of Dollars			
Fiscal Year	Timber Sales	Family Campgrounds	Group Camping	Total
1972	27	54	47	128
1973	25	118	50	193
1974	31	119	75*	225
1975	57	130	140	327
1976	65	129	175	369
1976TP**	28	71	45	144
1977	41	178	171	390
1978	91	178*	227	496
1979	181	173	230	584
1980	297	222*	225	744
1981	238	246*	253	738

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*Fees increased.

**Transition quarter to revised fiscal year.

Effective May 15, 1982, rates at the family campgrounds will be:

a. $6.00 per site without electricity, 5/15 through 9/15
b. $5.00 per site without electricity, 9/16 through 5/14
c. $6.50 per site with electricity, 5/15 through 9/15
d. $5.50 per site with electricity, 9/16 through 5/14

Current rates for group camping are as follows:

a. Adult professional meeting - $25 per day
b. Recreation education - 15 per day
c. Senior citizens - 11 per day
d. Youth - 11 per day
e. Disadvantaged - 6 per day
f. Camp Energy, per site - 6 per day

Question: Your budget justification indicates that in 1983 greater emphasis will be placed on making LBL activities even more self-supporting. What proposals will be considered?

Answer: TVA is considering whether and how it is feasible to form one or more organizations that can provide private sector financial and other support to increase LBL effectiveness and productivity at no increase in cost, to give structure to the LBL constituency and increased opportunities for private sector support of specific programs and causes, and to raise funds for specifically identified causes in LBL as an augmentation to Federal appropriations and fees. There are legal and programmatic implications that have to be considered.

Question: Why is there such a large increase, nearly $1 million in fiscal year 1983 from fiscal year 1982, in operating expenses for LBL?

Answer: The 1983 budget contains funds for some expensive but vital maintenance that has been deferred for years and cannot be deferred any longer if LBL is to be kept open. From fiscal year 1978 to 1982 the appropriated budget for LBL operations increased from $4,888,000 to $5,288,000 or approximately 8 percent. Considering inflation alone, LBL's fiscal year 1983 operating budget falls $950,000 short of providing services equal to 1978 levels. In addition, during that time significant capital improvements were made, including The Homeplace-1850, a living history farm opened for its first full year of operation in 1978; the Golden Pond Visitors Center, opened in 1979; and The Homeplace Interpretive Center, dedicated in 1981. However, there has been no additional funding to operate and maintain these facilities. To partially compensate for the requirements of operating these new programs and facilities, Empire Farm, Camp Energy Group Camp, and Rushing Creek Family Campground and related programs have now been closed. Also, facility and road maintenance have been decreased to the point of an "emergency only" basis in some areas.

The increased operating funds in fiscal year 1983--with no capital funds--will be used to bring maintenance of existing facilities closer to acceptable levels. Such maintenance is vital to protect a Federal capital investment of $62 million and maintain the usefulness of these facilities.

Question: Why is there a sizable decrease in the capital investment budget for LBL in fiscal year 1983?

Answer: Emphasis and priority has been placed on reopening and providing necessary maintenance and operating quality programs at existing facilities rather than on completing or initiating new capital projects during this time of financial stringency.

Question: Please describe in detail for the record your timber management program at LBL.

Answer: The forest lands at LBL are managed principally to provide a well distributed and balanced supply of food and cover for a wide variety of wildlife species, to complement outdoor recreation and environmental education opportunities, to improve timber species composition and quality, and to improve the aesthetic appearance of the forest, campgrounds, and high-use areas. Activities to accomplish these goals include reforestation, erosion control, timber harvest, timber stand improvement, and forest fire control.

Forests occupy about 151,000 acres (88 percent) of the LBL land area. Upland hardwoods are predominant with oak-hickory making up 88 percent of the forest stands. Eighty percent is in sawtimber stands. Annual growth is estimated at 20 million board feet. Management of the 151,000 forested acres at LBL is provided for in a comprehensive resources management plan. This plan identifies long-range goals, strategic planning elements, and operational guidelines for resource development. The plan was coordinated with the State wildlife agencies and the State divisions of forestry in Kentucky and Tennessee. It has also been reviewed by a number of universities and public groups.

LBL is divided into 65 areas to schedule forest management activities. A seven-year operating cycle has been established whereby nine or ten areas receive some work every year. Forest lands in an area are identified through photointerpretation. Foresters then inventory each forest stand to obtain stand condition and wildlife habitat information for future analysis. The field inventory data is compiled and analyzed, and forest stands are selected for harvest or other treatment, as prescribed, in coordination with wildlife biologists. The area timber management plans are then reviewed and approved through an interdisciplinary review process. Each year timber is harvested from approximately 3,000 acres of land with a resulting harvest volume approximating 6 to 8 million board feet of sawtimber and 8,000 cords of hardwood poletimber. This benefits the local economy by providing more than 100 full-time annual private sector jobs with a payroll exceeding $1 million annually.

Harvest areas approximately 30 to 40 acres in size are widely distributed throughout LBL to provide a dispersed pattern of wildlife habitat. Management operations also provide for the selection of stands to be set aside from all timber harvesting as examples of unique natural areas and for the protection and maintenance of unusual wildlife habitats, e.g., eagle nesting sites and wildlife den trees.

The majority of timber is harvested under a long-term contract issued under competitive bidding; some timber is harvested annually by small timber operators who bid on individual advertised sales.

The primary role of LBL's forest management program is to restore a depleted resource base to one capable of supporting wildlife populations and the outdoor recreation and environmental education needs of the visiting public.

COLUMBIA DAM AND RESERVOIR

Question: The TVA budget for fiscal year 1983 contains a request for $2,000,000 for the Columbia Dam project. What is the status of actual construction on the Columbia Dam and other associated work?

Answer: At the end of fiscal year 1981, 30 percent of the necessary funds had been appropriated. Approximately 50 percent of the land has been acquired, and the concrete portion of the dam is virtually complete. Road construction is approximately 40 percent complete. All other planned activities, such as mussel conservation work, land-use planning, wildlife management studies, and archaeological, historical, and cultural investigations, are progressing. Through February 1982 TVA has obligated $65.5 million on Columbia. The total estimated cost of the project is between $203 million and $216 million.

Question: What is the current status of funding for the Columbia Dam project?

Answer: Current funding available in fiscal year 1982 is $16.7 million. This amount, when added to TVA's request of $2.0 million for fiscal year 1983, provides a total of $18.7 million.

Question: Are any previously appropriated funds being deferred?

Answer: No appropriated funds are being deferred.

Question: How much has been appropriated to date?

Answer: To date approximately $78.6 million has been appropriated for the project.

Question: What is the actual level of obligations and expenditures through fiscal year 1981? What are your actual and planned obligations and expenditures for the current fiscal year?

Answer: Through fiscal year 1981 obligations totaled $63.2 million; expenditures totaled $62.7 million. Planned obligations in fiscal year 1982 total $10 million; expenditures will total $10 million.

Question: What level of funding was unobligated and carried forward into fiscal year 1982?

Answer: A total of $16.7 million was unobligated and carried forward into fiscal year 1982. Of the total amount, $15.8 million was deferred for the first 10 months of fiscal year 1981.

Question: Provide for the record a detailed breakout, by dollar amount, which shows how the $2,000,000 requested for fiscal year 1983 will be used.

Answer: The following table is provided for information:

	In Millions
Mussel conservation	$0.3
Land-use planning	0.3
Road and bridge construction	1.3
Miscellaneous	0.1
Total	$2.0

Question: How long does TVA estimate it will take to demonstrate the success of the mussel conservation program?

Answer: Our schedule calls for demonstrating to the Fish and Wildlife Service the likely success of the conservation program by late spring 1983. We expect to have proven success by spring 1985.

Under terms of the Fish and Wildlife Service biological opinion TVA will not resume earth embankment construction at the dam until the Service agrees that success is likely. TVA will not close the dam and impound the full reservoir until the program is proven successful.

Question: What is the current status and schedule for completing and issuing the section 404 permit?

Answer: The Corps of Engineers issued the section 404 permit on August 5, 1981. The permit authorizes certain activities related to completion of the Columbia Dam project. However, it contains a number of conditions including the requirements of the Fish and Wildlife Service biological opinion concerning completion of the dam and impoundment.

LAND AND FOREST RESOURCES PROGRAM

Question: Why is there a need for the increase in land and forest resources?

Answer: This relatively small increase--actually less than the anticipated inflation for this period--will allow TVA to continue its most significant high pay-off activities. Included among these are TVA's pioneering efforts to develop and implement microcomputer technology to improve forest management. This work will have immediate application on the hundreds of thousands of small, private forest ownerships in the region, and will help ensure an adequate supply of conventional wood products and biomass fuels for next century. This technology is already being used by State forestry agencies, the U.S. Forest Service within and outside the Valley, consulting foresters, and forest industries reflecting the national as well as regional signficance of this work. We are also working with the Bonneville Power Administration to determine its application to the needs in the Pacific Northwest.

RESOURCE MANAGEMENT AND DEVELOPMENT SUPPORT

Question: In resource management and development support there was a reduction of funding in fiscal year 1982. What specifically was the impact of this reduction?

Answer: The funding levels shown in TVA's President's budget indicate a decrease in funding for resource management and development support from fiscal year 1981 to fiscal year 1982. This apparent reduction is due to a change in the structure of the program content in fiscal year 1982 and fiscal year 1983 from that in fiscal year 1981. Actually, activity levels between fiscal year 1981 and fiscal year 1982 are essentially constant. The increase in fiscal year 1983 will allow TVA to more fully perform environmental compliance activities as required by Federal and State regulations and Executive orders. This will include field reviews of construction activities in or along the waterways of the region to ensure that no actions are taken that would damage the quality of the water, endanger fish or other aquatic organisms, increase the risk from flooding, or present hazards to navigation.

VALLEY MAPPING AND REMOTE SENSING PROGRAM

Question: Please indicate the level of funding during the last five years for the Valley mapping and remote sensing program and the accomplishments of the program during this period.

Answer:

	Funding ($000's)				
	1979	1980	1981	1982	1983
Valley mapping.........	751	711	733	675	790
Remote sensing.........	186	197	177	165	180
Geodetic control.......	-	-	-	-	40
Total............	937	908	910	840	1,010

During this period 225 topographic maps of various scales and an oversized, integrated map of the Tennessee Valley region were prepared. In addition, an automated mapping system was planned and designed and high-altitude photography covering 55,200 square miles was acquired for both mapping and remote-sensing application. Remote sensing accomplishments are numerous and they include investigations of digital image processing for map generation, photointerpretation applications as cost-effective alternatives to traditional field data collection, assessment of the trophic status of TVA lakes, wetland mapping, aquatic plant classification and mapping, hazardous waste disposal analysis, water quality analysis, air quality modeling and assessment, prime farmland mapping, biomass assessment studies, land encroachment detection, evaluation of strip mine effects, TVA land inventory, ground water mapping, development of a standard land use classification system for Valley-wide use, physical factor mapping and rating for industrial siting, geologic hazard mapping, and a prototype of a Valley-wide land use inventory system. An improved method to record county land records was also developed.

Question: Are there plans to phase out or transfer this program to other agencies?

Answer: No. The combined program is an integral part of TVA's resource development efforts and mapping activities are a basic component of the USGS National Mapping Program.

Question: Does the USGS have ability to perform these functions?

Answer: Yes. With additional resources, the U.S. Geological Survey could make the maps for the Tennessee Valley region and could provide for TVA's special mapping and remote sensing needs. However, we and the USGS do not believe this would be an efficient, cost-effective way to provide for the needs of the Tennessee Valley and TVA. For this reason, TVA and the USGS have a long-standing memorandum of agreement that recognizes TVA's mapping role to be in the Nation's best interest.

REGIONAL AIR MANAGEMENT AND CONSERVATION OF LAND AND WATER PROGRAMS

Question: Please provide for the record a five-year breakdown of funding for the individual activities within the regional air management and conservation of lands and waters programs.

Answer:

	Funding Breakdown ($000)				
	1979	1980	1981	1982	1983
Regional air management					
Trend monitoring...........	82	86	120	232	275
Air quality assessment.....	68	75	80	90	100
Air resource management....	58	60	100	243	246
Total.................	208	221	300	565	621
Conservation of public lands and waters					
Land use proposal review...	585*	433*	409	421	714
Archaeological inventory...	-	-	38	122	108
Heritage..................	66	88	140	157	166
Total.................	651	521	587	700	988

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*Estimated due to restructuring of these activities.

ECONOMIC AND COMMUNITY ASSISTANCE

Question: What is the rationale for continuing these types of programs in light of the Administration's efforts to return responsibility for economic and community development programs to State and local governments?

Answer: TVA's approach to economic and community development is basically supportive of the current Administration's efforts to return responsibility for economic and community development to State and local governments. TVA has evolved an efficient approach whereby TVA provides technical advice, guidance, and support covering a broad spectrum of expertise not available elsewhere, and the responsibility for bringing about local development resides with local citizens. The precepts on which this assistance is provided is spelled out in Chairman Dean's testimony to the committee. The key point is avoiding State and local dependency for continuing assistance. TVA has worked for nearly 50 years in partnership with communities of the region, and we have established close working relationships with State governments. TVA and State staffs often work together in communities, sharing information and expertise to help identify the best possible solutions to local economic problems. Though TVA represents a unique concentration of expertise and experience, the TVA model of partnership is no less appropriate under the Administration's current initiatives than it was when TVA was created as a novel way to increase the effectiveness of local and State self-help efforts.

Question: What is TVA doing to reduce and limit the Federal involvement in such activities?

Answer: Many communities throughout the Nation in recent years have become dependent on continuing Federal support for economic and community development. Instead of relying on their own resources and ingenuity, they have come to look to the available categorical grant programs in Washington to determine their strategies to stimulate local economic development. This may have demanded a program choice from the menu that did not, in all cases, meet the local needs. TVA recognized this trend years ago and adopted an approach in working with communities in the Tennessee Valley region which reduces this direct and continuing dependence on the Federal Government. We use our limited funding to provide technical advice, guidance, and support to help communities assume responsibility for solving their own problems. There must be clear evidence of a community's willingness and capacity to assume responsibility for long-term development before TVA becomes involved. The TVA approach is efficient and it works. Moreover, TVA only enters communities upon request, because we are only interested in working with those who will help themselves.

FERTILIZER INDUSTRY DEMONSTRATIONS

Question: Explain in more detail the nature of the nearly $40 million in nonpower proceeds that will be applied to fertilizer industry demonstrations. Specifically, how will these funds be utilized?

Answer: The nearly $40 million in nonpower proceeds is the commercial sales value of experimental fertilizers produced by TVA and sold as a part of demonstrations carried out through the fertilizer industry. These proceeds are used to pay most of the cost of producing the fertilizers. Overall, approximately 90 percent of the fertilizer industry demonstration program is financed from these industry payments.

AMMONIA FROM COAL FACILITIES

Question: Explain the problems associated with the operation of the ammonia from coal demonstration plant, which has been shut down for nearly a year.

Answer: The problems mainly concerned the inability to satisfactorily discharge the slag residue from the gasifier system. Modifications to the gasifier, slag removal, and slag handling systems, which we believe will correct these problems, are almost complete. There were other lesser problems identified, such as instrumentation, erosion in the coal slurry grinding and handling system, and abrasion on critical valves handling slag and water slurries. Modifications are being made to correct these problems as well.

Question: What is the nature and estimated cost of these modifications and how will these costs be split between TVA and Texaco?

Answer: Modifications for removal of the slag from the gasifier system and related problems have been funded by Texaco and will cost about $1 million. Coal wet grinding and refractory modifications under review are estimated to cost about $1.2 million. These changes are for more reliable operation over the long term. Texaco has expressed a willingness to pay part of this cost. How these costs will be split between TVA and Texaco is yet to be negotiated.

Question: What is the current schedule for restarting facility operations?

Answer: Facility operations are scheduled to be restarted in April 1982.

Question: What will be the budgetary impact of extending facility operation through 1984?

Answer: The original plan was to complete the development and operation program in 1983 with an estimated cost for the period 1977 through 1983 of $21.4 million. Because of the problems that have been encountered, test operation has been delayed and we have had to use some of our operating money to solve unusual startup problems and make some equipment modifications. The development and operation program costs for the period 1977 through 1984 is now estimated to be $25.1 million, an increase of $3.7 million.

ENERGY RESEARCH AND DEVELOPMENT ACTIVITIES

Question: What has TVA done to redirect and refocus its energy research and development activities in light of the Committee's concerns expressed in last year's report? Please be specific in terms of programs and dollars.

Answer: The committee guidance in last year's report coincided with TVA's own priority assessments. TVA has not requested any appropriations for national energy demonstrations projects in fiscal year 1983.

COAL GASIFICATION DEMONSTRATION FACILITY

Question: Provide for the record a current and complete update on the status of funds appropriated for the coal gasification demonstration facility, including costs, obligations, expenditures, and the activities planned for the remainder of fiscal year 1982 and for 1983.

Answer: During fiscal year 1982 most of the available funds will be spent on engineering, process license, site preparation, and project management. All of the preliminary engineering and most of the site preparations will be completed in this period.

During fiscal year 1983 TVA will continue to pursue all of the activities necessary to transfer the project to a private consortium. The actual fiscal year 1982 and fiscal year 1983 expenditures will reflect progress in completing the private consortium and their obtaining financial support from the U.S. Synthetic Fuels Corporation.

Coal Gasification Project Funding Status
(As of March 1, 1982)

	In Millions
Initial fiscal years 1980 and 1981 funds appropriated.....	$210
Fiscal year 1981 rescission..............................	85
Fiscal year 1982 appropriations..........................	-
Total available to project...............................	125
Total expended to date...................................	35
Total obligated to date..................................	54

NEW PROGRAMS AND ACTIVITIES

Question: Provide for the record a tabulation that shows any new programs, activities, or projects included in the fiscal 1983 budget, both appropriated and nonappropriated, along with a brief description, the total estimated cost and period of time the programs are planned for, and the amount of funds included in the 1983 budget for each item.

Answer: In 1983 no new capital projects are proposed. Neither are we creating any new categories of activity.

COST SHARING AT TVA'S RECREATION FACILITIES

Question: Of the $34.3 million requested for expense-related work, what portion is directly or indirectly related to recreation activities?

Answer: Of $34.3 million, $6.3 million is related to recreation activities. This amount reflects operation and maintenance costs for TVA's reservoir recreation areas and for recreation facilities at Land Between The Lakes (LBL). It also includes funding to support recreation program activities such as technical assistance to commercial recreation enterprises, demonstration projects, recreation planning for TVA lands, and programming at LBL.

Question: What is TVA doing to recover a greater portion of recreation-related expenses through increased user fees?

Answer: Presently, TVA charges user fees for camping at managed developed campgrounds on reservoir recreation areas and at LBL's family campgrounds and group camping facilities. Fees are charged for camping at those areas that have at least the following amenities: toilet buildings, individual campsites with tables and grills, onsite management and security, and, where possible, waste disposal stations. In fiscal year 1981, TVA had 19 developed fee campgrounds (excluding LBL) with 17 operating. In fiscal year 1982, 10 additional TVA camping areas will be converted to fee for a total of 29 fee campgrounds to be operated through a combination of direct TVA operation, cooperative concessionaire arrangements, and license agreements. The cooperative concessionaire and license arrangements have greatly reduced operating costs at selected areas where private individuals have been contracted to perform routine operation and maintenance in exchange for the camping fees collected.

Fees at TVA reservoir camping areas will be increased approximately 25 percent in 1982 to a base fee of $5 per site per night for up to four people, plus 50 cents per additional person. During fiscal year 1982 user fees at LBL family campgrounds will be increased by 20 percent, bringing these rates in line with those of private operators in the surrounding area. User fees for adult groups at group camps will be increased by 67 percent. In addition, LBL will charge fees for participation in some special events, including Eagles Weekend, Blue-Gray Affair, Nature Extravaganza, and Road Races.

PERSONNEL EXPENSES

Question: Provide for the record a breakout of the TVA personnel supported by appropriated funds, both directly and indirectly. The tabulation should be provided by major activity, in object classification form, and show the amount and numbers of people supported. Also provide a similar breakout for other than TVA personnel supported directly or indirectly by appropriated funds.

Answer: The following table is supplied for information.

TVA Personnel and Compensation by Major Program

	1983 Estimate	
	Employment	Object 11 Personnel Compensation ($000)
Natural resources*.............	1,507	39,107
Economic and community resources......................	236	7,493
Agricultural resources development....................	28	948
National fertilizer development	945	25,586
General services*..............	258	8,500

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*On occasion, employees in this category supply services to the power program. In these instances compensation is provided from power funds.

QUESTIONS SUBMITTED BY SENATOR SASSER

SOIL EROSION

Question: One innovative program which, I believe, is being extremely successful is the soil conservation and watershed activity in west Tennessee. TVA is making a contribution toward reducing the serious soil erosion problem in that part of the State. Tell us briefly the successes in this program, and I would ask you to elaborate further for the printed record.

Answer: Our major input in the program is through resource management conservation (RMC) demonstration farms. We have 85 farms on the program today. When they came on the program they were losing 244,390 tons of soil annually. When their conservation plans are fully implemented, soil losses will drop an average of 74 percent.

Already these farms have made significant progress and are showing the results of conservation practices to other farmers. During 1979-1981 our RMC farmers completed the following mechanical practices: 60.5 miles of terraces and diversions, 41 acres of waterways, 263 silting basins, 5 grade structures, 12 drop structures, 20 ponds, 2 lagoons, and 2,000 feet of tile drainage.

They established the following cultural practices: 11,849 acres of drilled soybeans, 9,695 acres of no-till, 6,402 acres of cover crops, 782 acres of pastures renovated, bought 33 no-till planters, and held 117 demonstration tours.

We are also active in the information-education program in west Tennessee. Through no-till workshops, conferences, countywide meetings, mass media, and demonstrations on the RMC farms, we have made much progress in conservation tillage. For example, acreage of no-till crop production was more than 200,000 acres in 1981, up from only 43,000 acres in 1978. This development is saving soil, labor, and fuel.

We are also assisting the Agricultural Stabilization and Conservation Service, the Soil Conservation Service, The University of Tennessee, and other agencies in completing soil surveys, a special agricultural conservation plan project, and area conservation demonstrations.

Question: How much is included in this budget for the soil erosion program?

Answer: $387,000.

Question: How much did TVA request of OMB?

Answer: We requested $4.8 million for agricultural resource development programs and finally received $3.7 million. OMB did not identify the specific cuts that should be made to accommodate the lower amount. Due to its priority importance, TVA elected to protect our soil erosion control programs from the overall cuts at the expense of other important agricultural development activities, including resource management and rapid adjustment farms, market development, and activities with low-income families such as home vegetable garden demonstrations and cash crops for youth. Since the original request was constrained by the OMB planning ceiling, even though the soil erosion program was not reduced, it does not meet our capability for the program.

Question: What could TVA accomplish if this committee were to restore some of the funding?

Answer: We could use an additional $1.25 million a year to substantially reduce the loss of topsoil, reverse the trends of declining yields of major cash crops, restore and conserve soil minerals and nutrients, and increase the value of agricutural land. The annual benefits will be many times greater than the cost. We estimate that our efforts can save at least $100 million a year.

To help achieve this progress, we would intensify the west Tennessee program, expand the current programs in north Mississippi and western Kentucky, and initiate a program in Alabama. These are the areas of most critical need.

We would also establish resource management conservations farms throughout the Valley where there is a need to demonstrate erosion control methods. We would also expand cooperative efforts with Federal, State, and local agencies interested in erosion control, assist counties in demonstrating control of soil loss from road banks and other publicly owned lands, create an effective public relations program to inform the public on benefits of erosion control, and conduct research in no-till crop production.

COLUMBIA DAM

Question: I would like to turn now to the Columbia Dam. My constituents and I are very disappointed that the budget before us includes only $2 million for this project. How much has been spent on Columbia and what percent of completion is it?

Answer: The project was 40 percent complete at the end of fiscal year 1981. Approximately 50 percent of the land has been acquired, and the concrete portion of the dam is virtually complete. Road construction is approximately 40 percent complete. All other planned activities, such as mussel conservation work, land-use planning, wildlife management studies, and archaeological, historical, and cultural investigations, are progressing. Through February 1982 TVA has obligated $65.5 million on Columbia. The total estimated cost of the project is between $203 million and $216 million.

Question: The Congress has been very clear on this project--the Congress supports it. The budget request before this committee does not comply with previous directives of this committee to complete this project as soon as possible. What level of funding did you request of OMB and, if you failed to request more than the $2 million, why didn't you request funding consistent with completing this project as soon as possible?

Answer: An estimate of up to $40 million--assuming removal of all constraints--was given the Administration for their use in considering TVA's 1983 budget request. However, as you know, the U.S. Fish and Wildlife Service has issued a biological opinion that an alternative mussel conservation program, if implemented successfully, would protect the species. Final impoundment should not take place until its success is proven. This issue is still open, since the Corps of Engineers' 404 permit for construction of the project is contingent in part upon the success of the mussel conservation program.

Therefore, an estimate of $2 million was determined to be an amount which could be spent efficiently in view of the project's uncertainties. This amount, together with funds already appropriated, provides funding to continue the mussel conservation program; cultural, historical, and archaeological investigation contractual obligations; wildlife management planning; land-use planning and planning assistance to the Upper Duck River Development Agency; and road and bridge construction necessary even if the project were not completed.

Question: Please give us a capability statement for the Columbia Dam project.

Answer: If all constraints surrounding the project were removed, we estimate an additional $28.6 million could be spent in 1983. This amount, together with funds already budgeted, would provide sufficient funding to continue construction at an expeditious rate.

The total amount of funding needed in fiscal year 1983 is $37.3 million. We anticipate carrying forward $6.7 million from fiscal year 1982, and we already have $2 million in our 1983 request. Therefore, our additional need for 1983 is $28.6 million. The level of spending assumes the removal of all present constraints on the project and is based on the most expeditious construction schedule.

Question: In my opinion, one of the major weaknesses in TVA's style of operation is the failure to secure public input on policy decisions. Later in the hearing we will discuss better public input as it relates to the power program. But as it relates to Columbia Dam, why didn't TVA seek public input from the residents of the area before unilaterally entering into the species agreement with the Department of the Interior?

Answer: Substantial public input has been obtained. The following is a list of public hearings that have been held on various subjects relating to the Columbia project.

Location	Agency	Subject	Date
Columbia, TN	TVA	Environmental impact statement	3/24/71
Columbia, TN	TVA/Administration	Water resource projects	3/3/77
Columbia, TN	Army Corps of Engineers	Issuing 404 permit	11/27/79
Washington, DC	Subcommittee of Committee on Government Operations	Project review	8/21/80, 9/24-25/80
Nashville, TN	State Division of Water Quality Control	Water quality	12/15-19/80, 1/5-13/81

Question: It is my understanding that Interior has the final say in the species protection plan process. What is TVA doing to assure Interior's agreement and approval?

Answer: There are two stages to the mussel conservation program. The first is a demonstration of likely success prior to third-stage diversion of the Duck River. The second is a demonstration of proven success of the mussel conservation program prior to closure. TVA has been working with the Fish and Wildlife Service, the Corps of Engineers, and State officials since 1980 on a comprehensive workplan to achieve both demonstrations in a timely manner. The parties have agreed on a program that will meet the requirements of the biological opinion. Funding has been sufficient for the program, and work has progressed quite well.

OVERSIGHT

Question: The GAO has produced what I believe to be a very worthwhile report on improving TVA oversight and accountability. I would like to insert this report at this point in the hearing record and I would like TVA to provide the Committee with a written report on your analysis of the options detailed by GAO.

Answer: We received a copy of the General Accounting Office's report on TVA's oversight and accountability systems on the date of this hearing and we were not given an opportunity to review that report in draft prior to that time. We are preparing specific comments on GAO's report which we will submit to the committee as soon as possible. When finished, this report will surely say that TVA does have an extensive oversight and accountability system that is in place and functioning as well as any in Government. The TVA system is also in accord with the recommendations of the Senate Environment and Public Works Committee.

Question: How can we be assured the projections of today's forecast are any better than that of three years ago?

Answer: We, of course, will not know for several years. This is always true in dealing with forecasts based on statistical analysis and historical experience. Nonetheless, TVA has invested considerable effort in strengthening its load forecasting methodology and now believes it has the most accurate economic and statistical tools that are available. This conclusion has been verified by non-TVA experts, including GAO, who have evaluated TVA's load forecasting system. However, using even the best approach, a forecast must contain significant uncertainties. TVA's load forecasting methods explicitly contend with uncertainty by bracketing key variables across a range of high and low values. Oil and natural gas prices, economic recession, inflation, interest rates, and other factors that have an impact on rates and load growth are bracketed in this manner.

How the load forecast is used as a tool for power planning is just as important as its accuracy. While TVA cannot alter the uncertainty associated with many future events, it is possible to minimize the risks to which its ratepayers are exposed. To accomplish this, decisions are based on the best information available (including the load forecast), and a choice is made among those outcomes that will minimize risks to TVA's ratepayers. For example, in the recent deferral of the Hartsville and Yellow Creek Nuclear Plants, the decision was made on the basis of TVA's high load forecast which minimized the risk of future power shortages and also assured that flexibility was maintained to restart the deferred units or substitute an alternative source of power if future load forecasts indicated a need for additional capacity.

DEFERRED NUCLEAR POWER UNITS

Question: How long does TVA anticipate these eight deferred units will remain deferred?

Answer: The eight deferred units will remain in a deferred status until TVA has information that indicates with some certainty that restarting or cancelling the units will be the most cost-effective option for the TVA ratepayer. TVA will keep the Congress informed of its deliberations in this matter.

Question: Will a decision be made on possibly cancelling any of the eight units? If so, when?

Answer: TVA will make the decision to cancel the deferred nuclear units only when it can be determined with reasonable certainty, for financial or other reasons, that restarting construction is not practical or necessary. TVA will keep the Congress informed of its deliberations on this issue.

Question: What actions is TVA undertaking to minimize the costs to the region's ratepayers of the deferral?

Answer: TVA is protecting and maintaining its physical investments in the five units which are indefinitely deferred. Also, TVA is protecting and maintaining the three units which are deferred with a greater possibility of a restart of construction to assure TVA's ability to renew construction. TVA is making the minimum expenditures required to secure TVA's investment in and expectations with regard to these units.

TVA is also tailoring its employment levels to reflect the reduced needs of the construction program.

Question: What will it cost TVA to cancel each unit?

Answer: In addition to the writeoff of capital costs incurred, the cost to cancel would include the cost of contract terminations and site restoration costs. These latter additional costs range from $50 to $150 million each for the eight deferred units, depending upon their status. These costs would be reduced by the salvage value for each unit which could be realized through sales of the surplus power plant equipment and construction materials.

Question: It is my understanding that TVA has established reserves for cancellation of these units. How much are the reserves you have established?

Answer: In fiscal year 1981, TVA made a $400 million provision for potential future loss on deferred nuclear units.

Question: Will the reserves come from borrowing or rate reserves?

Answer: This provision was made against retained earnings, acquired through revenues from the sale of electric power, accumulated through fiscal year 1981.

Question: Won't these reserves impact on rates and result in a larger rate increase in October?

Answer: Since this provision was made against prior year retained earnings, the $400 million reserve will have no impact on any future rate action.

OFFICE OF AUDIT AND EVALUATION

Question: What will be the emphasis of the new Office of Internal Audit and Evaluation with respect to their audits?

Answer: The emphasis can be categorized into the following three areas:

1. Financial and compliance--Determine that controls are adequate, procedures are followed, and financial statements present fairly the financial position and results of TVA operations; determine that contractors are in compliance with terms and conditions of contracts; and determine whether TVA has complied with applicable laws and regulations that may have a material effect upon the financial statements.

2. Economy and efficiency--Determine whether TVA is managing and utilizing its resources economically and efficiently; determine the causes of inefficiencies and uneconomical practices, and assist with implementation of improvements; and determine whether the laws and regulations concerning matters of economy and efficiency are being observed by TVA.

3. Program results--Determine whether the desired results or benefits of policies or programs established by the Board of Directors are being achieved and whether TVA has considered alternatives that might yield results at a lower cost.

Question: What direction will the Board give to the new office in regard to audit areas and reporting levels?

Answer: The Board currently reads all audit reports and requires appropriate followup by TVA management. In 1980 the Board directed the staff to expand management reviews, operational audits, and program evaluations. They desired and, of course, still desire assurance that TVA's programs are delivering desired results in the most economical and efficient manner possible.

Findings are reported to line management, the Board, and the Audit Review Group.

Question: Do you feel the resources devoted to internal evaluations are adequate?

Answer: The Office of Audit and Evaluation currently is composed of about 75 people, most of whom are professional employees skilled in internal auditing, industrial engineering, and program evaluations. During the next year about five employees will be added. This level should be adequate to provide top management and the Board with desired results.

Question: What role will the Audit Review Group play? Is there still a need for this group?

Answer: The Audit Review Group will continue to monitor the work of the Office of Audit and Evaluation, as well as employee misconduct and fraud investigations conducted by the Office of the General Counsel. This committee, composed of corporate-level officials, will continue to be instrumental in assisting with resolving findings in investigations, audits, and evaluations. It will continue to coordinate GAO investigations and the annual audit by the independent auditing firm. It will also report regularly to the Board summarizing the various audit work completed and unresolved findings.

There will continue to be a need for this committee to assist the Board in its efforts to eliminate waste, inefficiency, and misconduct.

NUCLEAR FUEL ANALYSIS

Question: A General Accounting Office report just issued points out that you decided to sell and lease back your nuclear fuel based on a 10-year analysis when the contract is for 30 years. GAO added that a detailed analysis was especially important because the transaction impacts not only on current electric rates but on ratepayers over a 30-year period, and takes certain financial data off the financing statements which is a controversial issue in the account profession. I understand you only recently started performing a 30-year analysis. Could you tell us when this study will be finished and explain why such a study was not done before the arrangement was made?

Answer: TVA has no such plans. It would not be in the ratepayers' best interest to conduct such a study since the lease may be cancelled by TVA with no penalty upon notice of 120 days.

Question: The GAO report points out a basic inconsistency in TVA policy. The Board has testified on a number of occasions that you are constrained by the TVA Act and Board covenants from deferring interest charges on construction. Yet, that is exactly what you are doing in the Seven States arrangement. Why is TVA acting in this inconsistent manner?

Answer: There is no inconsistency. The fuel lease agreement with Seven States is consistent with utility practice, accounting standards, good business judgment, and legal requirements, and affords the ratepayer a rate which in fiscal year 1982 is about 2-1/2 percent lower than would otherwise be possible. Therefore, this lease arrangement is consistent with Board policy rather than in conflict with it.

Question: Why didn't TVA look beyond one or two companies before signing a $2 billion contract? It seems you would want to assure competition in a contract of this magnitude.

Answer: This is not a $2 billion contract. It is a $96,000-per-year contract--that is the amount the management firm receives annually for their services. TVA discussed the arrangement with several firms and made the best deal possible; indeed, one which we believe will stand up well in any analysis by investigators knowledgeable in this field.

SEVEN STATES INVESTIGATION

Question: During the conduct of the Seven States investigation, I asked GAO to travel to California to take a look at the Seven States operation. TVA is paying Seven States an $8,000 a month fee under the terms of the contract, although Seven States has no responsibility for storage and upkeep of the fuel supplies, legal fees, or other overhead. All that is the responsibility of TVA. The GAO investigation found that the staff of Seven States Corporation consisted of one person. And that woman was responsible for six other accounts in addition to TVA's. So my question is this. Isn't the $8,000 a month fee--$96,000 a year--excessive? What functions does Seven States perform to merit such a fee? Is this fee paid from rate revenues?

Answer: The GAO said that the nuclear fuel lease financing arrangements with Seven States Energy Corporation is a "highly complex and sophisticated" financing arrangement. The annual fee of $96,000, which is paid from power revenues, is to compensate Security Pacific Financial Services for the development and ongoing management and administration of the nuclear fuel lease financing. It is erroneous to imply that the services of one employee is all that is required for this arrangement. Other Security Pacific Financial Services employees, with special expertise in this area of financing, have been and continue to be involved in providing these services.

EXCESS INVENTORY

Question: TVA is negotiating to buy, or has bought, uranium reserves from Federal American Partners for $4 million plus royalties. If you have excess fuel inventory and under contract, why did you buy this reserve?

Answer: TVA is not negotiating to buy additional uranium resources from Federal-American Partners (FAP). TVA presently controls certain uranium resources in the Gas Hills of Wyoming through contractual rights and a leasehold interest in certain properties. TVA's leasehold interest will expire in 1990 if the properties are not in uranium production or if production is not being diligently pursued. Given TVA's changing requirements situation, it is possible that production from the Gas Hills project will not be needed by 1990. The negotiations will, if successful, restructure the existing contractual relationship to provide, in part, a conveyance of FAP's ownership interest in the properties to TVA, thereby eliminating the production timing problem associated with a leasehold interest which could expire in 1990. FAP would also waive other rights it has concerning the manner in which future operations are conducted.

In summary, TVA is not buying additional resources but is restructuring the contractual relationship with FAP to ensure that TVA has the flexibility to develop the properties on a schedule and in a manner most beneficial to TVA.

Question: If the Financial Accounting Standards Board should change the Accounting Principle Opinion on disclosing off balance sheet items which is now under review, and require you to reflect the leaseback on your financial statements, what impact would this have?

Answer: If the Financial Accounting Standards Board were to change the opinion, it would simply place the ratepayers in the same position for the future as they would have been had we not entered into the transaction. The ratepayers would have had the full benefit of the transaction until such time as the change is effective.

NUCLEAR FUEL

Question: Is the $2 billion line of credit with the Federal Financing Bank counted toward the $30 billion debt ceiling?

Answer: The $2 billion commitment from the Federal Financing Bank, itself, is not counted against TVA's $30 billion debt ceiling. This commitment only represents the maximum amount of borrowings that Seven States Energy Corporation may have outstanding at any given time, since it is Seven States Energy Corporation that is the debtor in this financing arrangement with FFB.

However, as a matter of business practice, TVA considers the amount of Seven States debt to the FFB as diminishing to that extent the $30 billion debt ceiling. Since the $2 billion line of credit will not be reached for a number of years, it would be inaccurate to view the total $2 billion as part of TVA's outstanding debt at this time.

Question: You are projecting the $2 billion line of credit with the Federal Financing Bank for the nuclear fuel sale and leaseback will be reached by 1988. What are your options at that time?

Answer: When the $2 billion commitment is reached, our options are to request an increase in the commitment from the Federal Financing Bank, maintain the level of nuclear fuel financed under the lease at $2 billion with additional nuclear fuel needs financed on balance sheet, or seek other borrowing sources to provide additional financing for nuclear fuel under lease in excess of $2 billion.

Question: TVA contracted for nuclear fuel supply into the future to supply its planned construction program. However, eight units are now deferred and some may be cancelled. What is the impact of the recent nuclear plant deferrals on TVA nuclear fuel inventory?

Answer: The recent deferral of three nuclear units did not cause any impact on TVA's existing nuclear fuel inventory. It will, however, necessitate an adjustment to TVA's uranium supply plan (i.e., requisition of a new fuel inventory) starting in the late 1980s.

Question: If TVA's nuclear fuel inventory increases, what options do you have--sell it, try to get out of contracts, or what?

Answer: TVA's uranium supply plan provides for inventory control through adjusting production schedules of mineral rights projects and adjusting plans for market purchases. Other available options include uranium sales, loans, and renegotiations of procurement contracts.

Question: Your budget reflects an increase in uranium mineral rights acquisitions from $6 million in 1982 to $15 million in 1983. Why the increase with the current nuclear fuel status? Also, the coal land acquisition budget jumps from $6 to $19 million from 1982 to 1983. What specific lands do you anticipate acquiring?

Answer: First, it must be recognized that TVA will necessarily have to acquire additional coal and uranium in the coming years. However, this should be done in a businesslike way when prices are favorable. From this perspective, TVA has several ongoing acquisition programs in regard to presently controlled mineral rights, such as the acquisition of "windows," squaring up of boundaries, and extension of known mineral deposits. These acquisitions are generally phased through time on a priority basis and are designed to facilitate the present planning processes and the future use of the deposits. In addition, we are proposing to acquire additional interests in properties where TVA now has a partial rather than a 100-percent ownership.

These acquisition programs will allow TVA to enhance presently held mineral rights and will assist in providing the flexibility and control necessary to meet future fuel requirements. For example, with respect to uranium properties, TVA is considering an additional $4 million investment in the Federal-American Partners Gas Hills project in order to ensure that TVA's present leasehold interest can be retained without premature mining from the properties. This is a cost-effective method of retaining the flexibility to produce some of TVA's uranium requirements on a schedule which is consistent with the existing uranium inventory and the nuclear plant deferrals. We are also considering the purchase of an existing uranium mill very near the Morton Ranch project properties in order to provide ore milling capacity. This may be a cost-effective alternative to eventually building a new mill or hauling uranium ore to a more distant mill.

With respect to coal properties, we are pursuing ongoing programs primarily in the southern Illinois area. These programs are designed to consolidate our present holdings into mineable units.

DOCUMENTATION AND ANALYSIS TO SUPPORT BOARD DECISIONS

Question: Over the past months there have been several decisions by the Board that have been questioned from the standpoint of documentation and analysis to support the decision. The General Accounting Office has just issued a report pointing out you entered a 30-year lease to sell your nuclear fuel with inadequate analysis. Last year you approved a bonus plan which the General Accounting Office also informed me had little documentation. Could you elaborate on what controls the Board has to assure itself that a full range of analysis is performed and data presented before decisions are made?

Answer: TVA has in place solid, businesslike controls. TVA has not burdened itself with meaningless bureaucratic processes which do not aid in the decision process. The Board and the General Manager insist that TVA staff present a well-documented analysis to the Board before asking it for any significant decision. The Board questions staff thoroughly before reaching such a decision.

The nuclear fuel lease which you mention is a good case in point. A 30-year study would never be conducted by a well-run business, since it would serve no business purpose in a transaction cancellable on 120 days' notice.

Similarly, when the Board approved the retention contract arrangements its executive retention problems were well documented. We do not understand that GAO questioned the existence of TVA's serious salary problem. GAO itself had pointed out the serious problems of Federal pay compression on more than one occasion. TVA's continuing salary problems must be addressed. We have solicited the help of Congress in finding a workable solution.

COAL PURCHASE PROGRAM

Question: Last year the General Accounting Office published a report on TVA's coal purchasing program. TVA has taken exception to most of the findings in that report. It is my feeling that TVA has never addressed the basic message in GAO's report--that TVA needs a long-range plan for purchasing coal. Also, the Booz Allen report recommended that TVA develop a formal plan for coal buying. Does a plan exist or are you going to prepare a plan? When will it be available?

Answer: The TVA Board has reviewed TVA's long-term coal procurement strategies periodically in recent years. The strategies and objectives have been decided, but they are, of course, under periodic review. Plant-by-plant coal supply strategies for the next 10 years, supporting the plan, are also being revised. These supply strategies are aimed at providing maximum future procurement flexibility and are based on the unique requirements of each plant, expected coal burn at each plant, and a range of possible market conditions.

TVA continues to refine its use of automatic data processing systems to support plan development and nearer term management decisions. For example, a computerized coal data base is under development, new computer programs are assisting project scheduling, and managers are employing probabilistic methods for forecasting ranges of uncertainty in future coal requirements at TVA.

Question: TVA agreed with GAO that its coal price adjustment formula needed to be modified. A modified formula, developed by GAO was rejected by TVA. Has TVA developed a new price adjustment formula?

Answer: TVA has long recognized that establishment of valid price adjustments for variances in coal quality is a difficult problem which yields to no simple solutions. In 1981 TVA organized a coal quality task force to study the economic effects of variances in coal quality on generating unit performance as a necessary step in determining a viable price adjustment formula. The study proceeded deliberately because of the difficulties in distinguishing among the effects on unit performance of coal quality variances and the effects of other performance variables (unit age, rated capacity, maintenance levels). Because of interaction among thes variables, it is also difficult to assign economic costs attributable solely to variances in coal quality. The task force is presently preparing its report.

TVA management will review in detail the task force's findings in June 1982. TVA will keep the Congress informed of its decisions on this matter.

Question: With regard to coal sampling problems GAO noted at the Kingston Steam Plant the Board approved the award of a contract for improved sampling facilities at Kingston in September 1981. Have the new facilities been installed? If it has been installed, has it corrected the problems GAO noted?

Answer: These facilities have not yet been installed. The award of a contract was made to R. W. Green Company on September 18, 1981. The contractor will begin onsite work on April 1, 1982. Some preliminary grading and conduit work has already been completed.

These facilities will most likely be completed by October 1, 1982, and will enable coal unloaded from trucks to be sampled by a cross-stream cutter. TVA anticipates significant reductions in problems of sampling of all truck coal at Kingston as a result of this investment.

GENERAL

Question: Recently, the District Manager for the Appalachian District resigned with a complaint that TVA has lost touch with the people. Would the Board care to comment on this?

Answer: We welcome the opportunity to outline for the committee some of the steps TVA has taken in recent years to stay "in touch with the people."

The District Administrator program in itself was part of an overall effort by the TVA Board to bring the people in the region closer to the TVA decisionmaking process. In late 1979, seven managers were selected to serve as direct representatives of the General Manager and TVA Board in districts throughout the region, including four districts in Tennessee. A primary purpose of the program was to provide citizens and public officials a top-level information source and a more direct pipeline to TVA decisionmakers. The offices also serve as a quick response clearinghouse for citizens who have questions or problems with TVA activities or programs.

In 1978 TVA created a Citizen Action Office to find ways to institutionalize greater public participation in TVA's decisionmaking process. Beginning in October 1978 TVA instituted a toll-free direct telephone service for the use of all citizens of the region, publicized its availability, and encouraged its use. The Citizen Action Lines have been very popular. More than 135,000 calls have been received since the service was made available; between 4,000 and 6,000 persons use the service each month. The calls are responded to, summarized for the Board of Directors and other TVA managers, and constitute an invaluable source of regional public opinion.

Still another way TVA stays in contact with the public is by encouraging and participating in public meetings. In the past 30 months (September 1979 to March 1982) TVA has conducted about 270 public meetings on a wide variety of subjects in 27 cities and towns, for an average of more than 9 public meetings per month. Between 16,000 and 17,000 persons have attended one or more of these public meetings in that time period.

TVA invited the public to attend open Board meetings prior to the passage of the Sunshine Act of 1976. Since TVA opened its meetings to the public in 1975, citizens have been encouraged to attend the sessions and share views directly with the TVA Board and top managers. In recent years, many TVA Board meetings have been held in cities throughout the region. Since 1978, an estimated 152,000 people have been in direct touch with TVA through the Citizen Action Lines or as a participant in public meetings. Thousands of others have shared their views by mail and other means of communication.

Other examples of TVA's efforts to stay in touch with the people of the region include the following:

- Discussions with public participation experts both inside and outside of government to obtain suggestions and recommendations to improve TVA's ongoing efforts to involve the public in common concerns.
- Mass distribution of "A Citizen's Guide to TVA," a six-page pamphlet designed to encourage and aid Valley residents in expressing their views to TVA.
- Periodic mass mailings of reports and other documents pertaining to proposed TVA actions or programs.
- A recently announced public participation initiative patterned after the town hall meeting format. Citizens are encouraged to share their views and opinions with visiting Board members. The first meeting is scheduled for Paris, Tennessee, March 30, 1982. The Chairman and several key staff people will represent TVA.

RETENTION OF TOP TVA PERSONNEL

Question: In your response to the Senate Environment and Public Works Committee on the recommendations made at the March 16, 1981, hearings you state executive turnover has gotten worse. Could you provide me with a list of top TVA personnel who have quit since the executive retention program was rescinded in November 1981?

Answer: Eight TVA executives, grades M-8 to M-11, have left TVA since November 1981.

Another serious effect of salary compression is its impact on middle managers and professional staff. We estimate approximately 225 of these employees have left or retired since the beginning of fiscal year 1981. Many of these left for better opportunities, not only in the near term, but also because of better long-term advancement potential. We again solicit your aid in finding a solution to this serious management problem.

BOND CEILING

Question: In 1979, when Congress last acted on TVA's bond ceiling, TVA indicated that the $30 billion ceiling would be needed to support TVA's power program only until 1985. However, since that time you have deferred construction on 8 of the 14 units under construction, which should decrease the rate at which you are borrowing. At your projected rate of borrowing, how long will it be before the $30 billion is expended or committed?

Answer: Assuming construction is not resumed on the eight units in deferral, we will not exceed the $30 billion limit until after the year 2000. If the decision is made to resume construction on some of these units at a later date, the $30 billion could be reached in the 1990s.

Question: At what level will your borrowings now be in 1985?

Answer: TVA's expected amount of borrowings outstanding by the end of fiscal year 1985 is $17.9 billion.

STRATEGIC PLANNING

Question: What is the status of TVA's strategic planning process and when can we expect a draft plan out for comment and review?

Answer: TVA initiated a new corporate planning system in January 1980. This system includes a strategic planning process consisting of activities dealing with economic forecasts, policy analyses, program evaluation (now under the direction of the Office of Audit and Evaluation), public participation, situation assessments, an annual policy conference among top managers, and development of a corporate strategic plan.

An early product of TVA's strategic planning process was a draft statement of corporate purpose and direction. That statement was distributed to and reviewed by TVA employees and persons outside TVA through a series of roundtable meetings arranged by TVA's Citizen Action Office. Those internal and public meetings led to release of TVA's strategic goals in February 1982. The statement of strategic goals is not a formal corporate strategic plan, but rather provides the mission and goals toward which a strategic plan can be targeted.

A formal, long-range planning process has been developed for the power program, and the strategies which have evolved from that process are reflected in TVA's January 1982 report, "Review of the TVA Load Growth/Plant Construction Situation." In addition, the Office of Power develops updated multiyear plans (referred to as "area plans") which provide managers operational guidance as they pursue TVA's strategic goals related to the power program. Similar plans for other major programs in TVA have been drafted. All of these program-level plans reflect the direction and policy guidance provided by the TVA Board in the statement of strategic goals.

As an ongoing part of its corporate planning system, TVA develops an annual corporate situation assessment which portrays a balanced picture of the present and likely future working environment within which all TVA's programs operate. Information for the 1982 assessment will be gathered from within and outside TVA in order to objectively characterize factors of strategic importance to the corporation. The assessment will provide insights into alternative strategies which TVA should consider to achieve its goals. The assessment and alternative strategies will be discussed at the 1982 Policy Conference now planned for November, and a formal strategic plan will be developed by the end of the year.

Question: Could you please explain how the public participates in TVA's strategic planning and identify any proposals you would have for increasing public involvement in this area?

Answer: Attached is an excerpt from TVA's Corporate Planning Manual that describes the framework TVA uses to involve the public in its strategic planning activities. The participation of TVA Board members in the five public forums held earlier this year on the issue of nuclear plant construction schedules was a concrete example of this public participation process.

In addition to public forums on specific policy issues, TVA has established other means of ensuring that public opinion is considered in strategic planning. These methods include:

- Open TVA Board of Directors meetings.

- Newly instituted "listening sessions" where individual Board members periodically hold townhall types of meetings in different Valley communities. These sessions will give citizens an additional opportunity for person-to-person discussions with Board members on general Agency issues or TVA projects and programs in their area.

- A toll-free Citizen Action Line which provides citizens a central point of contact for action on their questions or complaints. Citizen Action Line telephones are manned periodically by Board members and other top managers.

- Bimonthly and annual public participation reports provided by the Citizen Action Office which summarize concerns expressed by persons attending public forums and calling the Citizen Action Line.

TVA's public participation efforts were commended at a March 4-5, 1982, workshop on "Public Participation in Planning" sponsored by the Edison Electric Institute. This was a meeting of national utility representatives, including the Bonneville Power Administration, Ontario Hydro, Pennsylvania Power and Light, Florida Power and Light, Northern States Power, and San Diego Gas and Electric. TVA was cited as a veteran in the consumer affairs field and was the only organization represented at the conference which has a centralized, comprehensive program for identification of citizen concerns and responsive analysis of those concerns for top management.

In addition to the above, TVA plans to increase public involvement in its strategic planning by inviting persons outside TVA to contribute to the annual corporate situation assessments which provide background for the multiyear plans developed for TVA's major programs. Through discussions with TVA staff, persons knowledgeable in the program areas in which TVA operates can provide opinions on trends and issues which TVA should consider in its strategic and long-range operational planning.

PUBLIC PARTICIPATION IN STRATEGIC PLANNING

I. Definition

Many publics share an interest in and are affected by TVA's activities. These publics include private citizens, elected officials, public agencies, consumer groups, the power ditributors, and others concerned with regional and national issues.

Public participation in TVA strategic planning is that set of activities through which TVA communicates with its several publics on issues important to the region, as well as the goals, strategies, and program directions with which TVA proposes to address those issues. It includes both obtaining information from and conveying information to these publics.

II. Purpose

TVA offers opportunities for public participation in strategic planning to (1) ensure that public concerns are considered before final policy decisions are made; (2) increase public understanding of and support for TVA policies; and (3) convey to TVA's publics information they will find useful in helping to resolve critical regional issues.

III. Participants and Responsibilities

Involving the public in TVA strategic planning requires that line offices, the Office of Planning and Budget (OPB), the Citizen Action Office (CAO), the District Administrators, and the Information Office work in concert.* The Board of Directors will decide which policy questions are submitted to formal outside review and at what stage of policy development that review occurs.

A. Line Offices

1. In cooperation with OPB, and at the Board's request or in response to their own office needs, develop policy analysis papers on issues of concern to programs of the office.
2. Identify publics which should participate in the process of addressing a given policy issue.

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*The Citizen Action Office is now part of the Information Office.

3. Assist the CAO as needed in planning and conducting public meetings and other information-gathering activities on policy issues within their areas of responsibility, as well as in analyzing the policy implications of information obtained from the public.

4. Cooperate with the Information Office in planning and implementing programs to inform the public on regional issues and the interrelationships among those issues.

B. Office of Planning and Budget

1. In cooperation with line offices, develops policy analysis paper on issues of concern to the Board and/or the offices and ensures that these analyses are logically integrated with other elements of the corporate planning system.

2. Works with the CAO and line offices to develop guidelines, specific objectives, and processes for public participation in decisionmaking on given policy issues.

3. Identifies publics which should participate in the decisionmaking process on a given policy.

4. Assists the CAO and other central and line organizations as needed in conducting public meetings and other information-gathering activities and in analyzing the policy implications of this information in an annual public participation report.

5. Works with the Information Office in identifying and informing the public on regional issues and interrelationships among those issues.

C. Citizen Action Office

1. In cooperation with line offices and OPB, develops specific processes for public participation in policy decisionmaking.

2. Identifies publics which should be included in the decisionmaking process.

3. Conducts public meetings and other information-gathering activities on policy issues and works with OPB and other central and line offices in analyzing the policy implications of this information in an annual public particpation report.

4. Ensures that the public receives timely and adequate feedback on how their ideas and concerns are incorporated into TVA policy decisions.

5. Cooperates as needed with the Information Office, OPB, and the line offices in informing the public on regional issues and interrelationships among those issues.

D. District Administrators

1. Are alert to issues which may have implications for TVA goals, strategies, and program directions, and communicate this information to the General Manager, OPB, and appropriate line offices.

2. Identify publics which should particpate in decisionmaking.

3. Assist CAO and OPB as needed in planning and conducting public meetings and other information-gathering activities related to policy issues and in preparing the public participation report.

4. Work with the Information Office in planning and implementing programs to inform the public on regional issues and the interrelationships among those issues.

5. Work with CAO to ensure that the public receives adequate feedback on how their ideas and concerns are incorporated into TVA policy decisions.

E. Information Office

1. With the assistance of OPB, the line offices, and CAO, plans and implements communication programs to inform the public on regional issues and interrelationships among those issues.

2. Identifies publics which should be included in the decisionmaking process.

PUBLIC PARTICIPATION IN RATEMAKING

Question: In response to recommendations from the Senate Committee on Environment and Public Works, TVA adopted a policy of announcing proposed rate increases approximately 4 weeks before the Board takes final action. The policy change--from 2 weeks--is intended to permit the public a greater opportunity to analyze the proposed rates and offer the Board comments. What actions is the Board taking to insure public comments and concerns are addressed prior to the Board taking action?

Answer: TVA has had only one rate increase since implementing a policy of announcing rate adjustment information four weeks prior to a final decision. The following actions were taken prior to the Board's decision:

- As early as March 19, 1981, the Senate Appropriations Committee was notified, in response to a question from Senator Huddleston, that a rate increase could be required the following October 1. A few days earlier, during a Senate Environment and Public Works Committee oversight hearing in Washington, D.C., Chariman S. David Freeman discussed the possible need for a rate increase later in the year.

- TVA's proposed budget for fiscal year 1982, made available to the Senate Appropriations and Environment and Public Works Committees, also discussed estimated ranges of power revenue and expenses and indicated the need for rate increases in the fiscal year.

- All Valley delegation members and the staffs of the Appropriations and the Environment and Public Works Committees were also reminded on August 6 that a rate increase would be discussed during the Board of Directors September 2, 1981, meeting. The same parties were informed in late August (by press releases and copies of the Board agenda) that the proposed rate increase was on the September 2 agenda.

- On August 4, 1981, TVA power staff met with members of the Rates and Contracts Committee of the Tennessee Valley Public Power Association to discuss the Agency's 1982 power financial forecast and anticipated revenue requirements. A similar meeting was held between Office of Power staff and the Rate Committee of the Tennessee Valley Industrial Council on August 5, 1981. In both sessions the possibility of a rate increase was discussed. Comments by both the TVPPA and TVIC were addressed directly during the briefings and both groups were also provided detailed informational packets concerning the proposed increase the following week.

- At the August 6, 1981, Board meeting, Manager of Power Hugh Parris, presented power system revenue requirements. An information packet was distributed to the media which included Parris's presentation to the Board, a power cost fact sheet, pertinent charts and graphs, and a press release. Simultaneous with the Board meeting, press information meetings were being held in Bristol, Tennessee; Chattanooga, Tennessee; Florence, Alabama; Tupelo, Mississippi; Memphis, Tennessee; Paducah, Kentucky; and Nashville, Tennessee. A closed-circuit video of the Board meeting was provided at those meetings and power representatives used additional visual aids to facilitate a clearer understanding of the proposed increase.

- On August 7, 1981, TVA made a mass mailing to approximately 1,070 Valley citizens who had attended previous meetings on PURPA or rate review meetings. The mailing included basically the same information given to the media with a cover letter requesting comments via the toll-free Citizen Action Line. In response to the mass mailing and extensive media coverage, a total of 33 calls consisting of 24 complaints and 9 requests for information were received between August 6 and August 26. (Total calls for that same period were around 3,100.)

- At the September 2, 1981, Board meeting, a rate increase was adopted by the Board to be implemented in October 1981. Media information meetings were again held in previously mentioned cities simultaneous with the Board meeting. Again, Power representatives were available for questions.

Question: Will documents similar to the "Review of and Response to Public Comments on Review of the TVA Load Growth/Plant Construction" situation be issued?

Answer: TVA will use whatever means are necessary to keep the public informed of any change in TVA policy--whether it pertains to rates or other matters of interest to the Valley citizens. We will look at each issue separately and use appropriate means to reach the citizens and make sure that each has an ample opportunity to comment on any issue affecting the Valley and its people.

The Citizen Action Office maintains numerous mailing lists and periodically distributes staff reports, studies, and proposals to the public.

QUESTIONS SUBMITTED BY SENATOR STENNIS

PRESERVING FARMLAND PRODUCTIVITY

Question: What is the need in the area of preserving farmland productivity and what can TVA do about helping meet this need?

Answer: In recent years economic pressures have forced farmers to use their farmlands more intensely than ever. The worldwide demand for grain crops has encouraged farmers to shift land from permanent vegetative cover to row crops--primarily high-value soybeans. In this process, soil conservation practices have been neglected and some conservation structures--such as terraces-- have been destroyed. The result is a serious and growing problem of soil erosion. Erosion is most severe in west Tennessee, western Kentucky, north Mississippi, and north Alabama.

Other States are also losing large tonnages of productive soil. Of the 27.4 million acres of land in farms in the Tennessee Valley region, an estimated 3 million acres have severe erosion problems.

There is a critical need to implement programs that will substantially reduce soil losses and productivity while maximizing farmer income. Estimates indicate that for the Tennessee Valley region, more than $100 million annually can be saved by preventing plant nutrient and water losses from soil erosion and the resulting yield increases.

TVA, the land-grant universities, SCS, ASCS, and other agencies are conducting a program to preserve farmland productivity and soil erosion in west Tennessee. A similar and less intense program is underway in north Mississippi and western Kentucky. A similar program is needed in Alabama.

These kinds of programs are proving to be very effective. For example, no-till farming is one of the practices being promoted in the west Tennessee program. During the first three years of this program, no-till acreage has increased from less than 43,000 acres in 1978 to 200,000 in 1981.

The kinds of programs needed and those TVA can provide leadership in include: (1) Conduct field and technology demonstrations with farmers to show the advantages of minimum tillage, sod planting, and other erosion control practices. (2) Establish and/or expand whole farm management systems that minimize erosion while generating adequate net returns to the farming operation. (3) Conduct public education activities to help create understanding of the seriousness of the soil erosion problem.

HARDWOOD FUELS RESEARCH

Question: What is TVA doing to develop a more economical and efficient process for converting wood to ethanol?

Answer: Alcohol is a substitute fuel for the transportation industry and can reduce economic and strategic dependence on imported petroleum. While production of alcohol from grain is known technology, many areas of the United States, including the Tennessee Valley, Appalachia, New England, the Ozarks, and the Pacific Northwest, have greater underutilized forest than agricultural resources. For example, with development of an efficient and economical process, underutilized hardwoods in the Tennessee Valley could replace about one-third of the Valley's automotive fuel needs. TVA has a comprehensive and integrated program designed to develop information to use this vast, underutilized resource with major emphasis on development of an efficient and economical process to convert hardwoods to ethanol. TVA has a prestigious record in developing processes for industry to use through our fertilizer program which also provides laboratory facilities and scientific expertise for the hardwood fuels research.

Currently TVA has a major effort underway to develop an acid hydrolysis process for converting wood to ethanol. This work is building on an earlier process development by TVA in cooperation with the Forestry Products Laboratory of the U.S. Department of Agriculture in Madison, Wisconsin. While used in the Soviet

Union, the process is not economical or energy efficient for conditions in the United States. Process improvements under study will decrease processing and investment costs, and increase alcohol yields from 40-50 gallons per ton of wood to a goal of 70-80 gallons per ton. To achieve these results most rapidly and with the lowest expenditure of Federal funds, TVA has coordinated with other organizations to ensure that existing information is used and to avoid duplication of effort. In addition, discussions have been held with representatives of USDA, DOE, and the Bonneville Power Administration, and coordinated efforts are underway with numerous universities and private research organizations in the United States and foreign countries. Development of a process which industry can commercialize to use underutilized wood resources is in our national interest.

PHOSPHATE RESEARCH

Question: What problems arise from the use of low-quality phosphate ores in fertilizer production and what is TVA doing about them?

Answer: Phosphorus is one of the essential nutrients for plant growth. Virtually all phosphorus is obtained from phosphate ore. The United States is the world's leading producer and exporter of phosphate for fertilizers. These exports earn nearly $2 billion per year in foreign exchange. About 80 percent of this phosphate is mined and processed in central Florida. Supplies of best quality ore are expected to be essentially depleted by the end of the century, and mining operations are already moving to south Florida where supplies are plentiful but quality is lower. Efficient use of the lower quality phosphate for fertilizers will require new or modified technology.

The world's most extensive and best quality phosphate reserves are in north Africa, particularly Morocco. If the United States does not adapt to the use of low-quality rock it will lose its dominant position in world phosphate trade and could become an importer of phosphates by the end of the century. This clearly would not be in the national interest since phosphate is essential to our vast agricultural production.

Use of the lower quality phosphate ores results in (1) increased raw material, energy, and overall processing requirements with associated higher costs; (2) fertilizers of lower concentration; and (3) fertilizers that often are difficult and more costly to store, handle, and apply. TVA is approaching the problem on two fronts--improving methods of upgrading the low-quality ore, and developing technology that will permit use of the low-quality ore with minimum adverse effects on the cost and quality of the finished fertilizer.

CHEMICAL FACILITIES

Question: Why is it necessary for TVA to construct prototype- or demonstration-scale production facilities?

Answer: The chemical facilities program provides capital funds for construction of prototype-scale (often referred to at TVA as demonstration-scale) facilities for production of new and improved fertilizers resulting from TVA's research and development work. These facilities usually have production rates of 10-20 tons per hour as compared with commercial production rates of 50-100 tons per hour. Funds are also provided for plant modifications, pollution controls, and replacement equipment.

TVA's basic fertilizer research and development work is carried out in the laboratory (a few pounds per hour) and the pilot plant (1-2 tons per hour). Some new developments are adopted by industry at this stage and a demonstration-scale unit is not required. Usually, the industry considers capital investment in a plant based entirely on laboratory and pilot-plant data to be too high a risk. Construction of a demonstration-scale unit by TVA permits us to:

1. Debug the new process at semicommercial size and provide reliable data to industry for scaling up to commercial size.

2. Provide enough new fertilizer to help commercial fertilizer distributors establish a market for it.

3. Demonstrate improved economics or agronomic value of the new or improved fertilizer through actual use by farmers.

RELATIONSHIP BETWEEN TVA AND USDA

Question: Is there not duplication of effort in fertilizer R&D between TVA and USDA.

Answer: Since 1933 TVA has had enormous impact on fertilizer research and development in the United States. In creating TVA, Congress instructed the new agency to convert idle nitrate plants at Muscle Shoals, Alabama into a national fertilizer laboratory and to work with farmer organizations and others to introduce improved fertilizers and better fertilizer-use practices across the country. Thus TVA operates the National Fertilizer Development Center at Muscle Shoals, Alabama. It is the Nation's most complete fertilizer research facility and the source of most new fertilizer technology in recent decades. The USDA carries on extensive programs of agricultural research, extension services, regulatory functions, etc. However, USDA does not carry out fertilizer R&D.

The USDA for many years had a fertilizer R&D effort, though less comprehensive than that of TVA. In 1965 it relinquished this effort in favor of TVA with the concurrence of the Senate Appropriations Committee (Senate Report No. 156, dated April 9, 1965). TVA researchers maintain contacts with USDA to keep abreast of their work, to apprise them of TVA efforts, and to relate the two programs for maximum benefit. When appropriate, the two organizations agree to specific areas of cooperation. A current example of this cooperative effort is a program for controlling soil erosion in west Tennessee.

IMPROVING EFFICIENCY OF NITROGEN FERTILIZERS

Question: What is TVA doing to improve the nitrogen use efficiency?

Answer: In 1981 about 12 million tons of fertilizer nitrogen was applied by U.S. farmers. Most studies show that about one-half of the nitrogen is not utilized by crops, depending on type of soil, crops, and climatic conditions. A large part of the nitrogen is lost from the soil as gases or through leaching or runoff. Roughly one billion dollars and 200 billion cubic feet of natural gas are used annually for nitrogen that is of no benefit to crops. Nitrogen not utilized by crops can create environmental problems.

Major pathways of nitrogen loss from soils have been identified. The background is now set for developing new fertilizers or additives to fertilizers and improving application and farming methods to minimize nitrogen losses. A number of remedies are being developed: fertilizers that release their nitrogen at a controlled rate; improved fertilizers that tie up nitrogen more tightly so that it is less subject to volatilization; additives to inhibit biological action in the soil that can cause nitrogen loss; and timing of nitrogen application to "spoon feed" the crop. TVA's goal for this effort is to increase nitrogen use efficiency by 10 percent by 1989. The annual benefits from this increase would be a savings of 40 billion cubic feet of natural gas and 200 million dollars based on 1982 gas prices.

QUESTIONS SUBMITTED BY SENATOR HUDDLESTON

LAND BETWEEN THE LAKES

Question: What regional economic benefits would result from an intensified marketing effort for the Land Between The Lakes?

Answer: LBL is the focal point for a billion-dollar tourist industry in western Kentucky and Tennessee. The LBL resource base can accommodate a substantial increase in use--a doubling of the 2.5 million annual visits--at only a relatively small increase in cost. A substantial increase in visitation to LBL and the region would certainly result in a commensurate rise in private investment over the long term, and a significant increase in cash flow to existing business in the near term. Even a 50 percent increase in LBL visitation should result in an estimated $100 million in economic activity in the immediate area.

Question: What are some of the specific actions you would take to extend LBL's recreation and educational benefits to a greater number of visitors, assuming funds were made available.

Answer: Currently closed facilities, such as Empire Farm, would be reopened to not only increase visitation but also provide an educational opportunity for each visitor. Ongoing efforts to work with the private sector to promote the region would be intensified. Ticks currently inhibit use of the area during the summer months; therefore, efforts to control them would be increased. The Best Farmland Management Practices demonstration involving TVA, the Soil Conservation Service-U.S. Department of Agriculture, and soil conservation districts in Kentucky and Tennessee would be implemented. As a result, cooperative farmers at LBL would use new management techniques and products to increase economic gain while reducing soil erosion, and LBL's visitors would have an opportunity to learn about best management techniques.

Question: I assume, then, you have a need for additional capability to carry out these efforts.

Answer: Yes, an additional $750,000 operating dollars would be required to carry out the activities identified in the answer to the previous question.

Question: What about capital dollars? The budget shows a substantial decrease in your request over previous years.

Answer: In recent years most of our capital investment has been directed at upgrading The Trace, the main road artery through LBL. Improvements to be completed in 1982 should ease problems on The Trace through 1987. While we will have additional capital needs in the future, our emphasis in 1983 will be on operating those facilities already in place. Recognizing the limited funds available, we feel that this should be the primary focus.

ATMOSPHERIC FLUIDIZED-BED COMBUSTION

Question: What is the status of the AFBC pilot plant construction? What are TVA's plans for the future regarding AFBC?

Answer: Construction of all major systems and components of the 20-MW AFBC pilot plant has been completed. Through 1982 the pilot plant program is expected to cost $80,570,000. Of this total, $40,134,000 (50 percent) will have been funded from TVA power revenues, $36,926,000 (46 percent) from appropriations, and $3,510,000 (4 percent) from the Electric Power Research Institute (EPRI). Testing at the pilot plant will begin in May 1982 and will continue through 1986 and cost an additional $28,100,000.

TVA is considering the possibility of a 160-MW add-on AFBC boiler to replace the existing boiler at unit 10 of TVA's Shawnee Steam Plant. This would be the next step in TVA's efforts to demonstrate the AFBC technology for commercial power system application. TVA has invested $7,100,000 of power funds in demonstration plant planning and design.

TVA has expressed its interest to EPRI in hosting construction and operation of a demonstration-scale plant at TVA's Shawnee Steam Plant. EPRI, concurrently, is investigating the possibility of a consortium of interested parties to help finance this kind of demonstration. In the absence of Federal funding, TVA's decision on demonstration plant construction will of necessity depend on agreements for financial support with EPRI and with any consortium that is organized.

WATER RESOURCES

Question: An adequate supply of high-quality water is becoming a matter of great importance to many areas of the Valley. It is a key to their continued development--economically and socially. What is your assessment of this problem and what can TVA do about it?

Answer: The Tennessee Valley is experiencing water quality and quantity problems that have already had a detrimental effect on the economy. As a steward of the Valley's water resource, TVA is in a position to address these problems before a crisis is reached in the Valley. Some areas of the Valley have turned to ground water to meet their water needs because of a lack of available surface water. Because ground water too is limited, industrial growth in these areas may cease unless alternative water sources are found. Areas such as Tupelo and Corinth, Mississippi, Muscle Shoals and Killen, Alabama, Cocke County and the Holston River basin, Tennessee, and Catoosa County, Georgia, are already experiencing such problems and other areas of the Valley are showing the same symptoms.

Because of the lack of information on the Valley's ground water resource, TVA is conducting an assessment of the quantity and quality of ground water. This assessment will be completed in fiscal year 1983. TVA will help communities take advantage of this resource where the assessment shows ground water to be an adequate and safe alternative.

Pollutants from municipal, industrial, and agricultural sources also may affect water quality in the immediate vicinity and downstream. For example, water quality in Kentucky Lake is directly affected by the water quality of Pickwick Reservoir where pollutants have deteriorated water quality so much that very recently a major industry did not locate there. TVA works with appropriate State agencies in correcting the most serious surface water quality problems. TVA involvement in State and regional planning processes allows direct participation in waste load allocations, decontamination efforts, treatment process changes, and improved water treatment and distribution--all resulting in sufficient and healthful water supplies to support the region's citizens, municipalities, and current and prospective industries.

TVA has recognized for a number of years that the amount of dissolved oxygen in releases from many of its dams is below desirable levels. This is not a problem unique to TVA installations. All across the country there are reservoir releases showing similar characteristics. TVA undertook an extensive study and testing program in 1980 to explore ways to reduce this problem. TVA has successfully experimented with hub baffles and continues to refine the baffle installations and to explore other methods improving the dissolved oxygen content in reservoir releases.

Other problems, such as acidic runoff and erosion from coal and other mineral mines, are affecting water quality in certain areas of the Valley including the Upper Bear Creek Reservoir area in north Alabama, the Nolichucky River area in western North Carolina, and Fentress County, Tennessee. Cooperative management and reclamation efforts which have begun in these areas can lead to improved water quality, a restoration of land productivity, and increased opportunities for economic growth.

TVA has a great deal of expertise in water issues and the capability to find real-world solutions to these very real problems based on record of success. An additional $2 million in 1983 would significantly improve our effectiveness to address these problems and help prevent a water resource crisis from occurring in the Tennessee Valley region.

FORESTRY

Question: How does TVA's work result in improved forest management technology development? How do these efforts coordinate with what the States and other Federal Agencies are doing?

Answer: TVA is the acknowledged national leader in bringing microcomputers to forestry. Organizations and individuals from all parts of the country are beginning to seek TVA's help in the use of these tools. The U.S. Forest Service and Valley States depend on this program to supply regionally accurate microcomputer programs for use on public land and the hundreds of thousands of small, private forest holdings in the Valley. TVA is also working with the Bonneville Power Administration in areas of mutual interest. These programs not only effectively handle technical management plans for forest properties, but provide an accurate analysis of financial and other benefits to be realized from their implementation. Well-defined benefits furnish the incentive needed for landowners to be willing to invest in the future of their forests.

Question: What are some of the benefits from TVA's forest utilization projects?

Answer: TVA concentrates on increasing the use of surplus wood to achieve economic gain for the Valley and the Nation. Both existing and new industries are assisted. A 1979 survey showed 9,100 new jobs, a $183 million jump in payroll, increased product value from $1.4 to $2.7 billion, and a 40 percent increase in wood use from 352 million to 493 million cubic feet between 1975 and 1979 in the Valley. TVA contributed significantly to these results.

TVA averages over 400 contacts annually with firms and individuals providing information on forest products, technical developments, and available wood and wood wastes for both conventional products and fuels. At least 40 firms have expanded or established new operations in the past three years following TVA assistance. Also, in this interval the Valley's pulp and paper industry added some 2,000 tons in daily pulping capacity--a 30 percent expansion--representing an investment of over $0.5 billion. This created a new annual demand for 1 million cords of pulpwood and over 1/2 million tons of energy wood, and created over 1,000 new jobs in timber harvesting and hauling. In addition, over 500 high-wage mill jobs were created with a payroll of $9 million a year. TVA provided wood resource information to these expanding companies and initially participated in siting their Valley plants. Additionally, TVA is working cooperatively with the U.S. Forest Service, Bonneville Power Administration, and industry to determine and disseminate information to increase the practicality and reduce the cost of removing timber and wood wastes from the forests.

Question: Does the forest resources development program have additional capability in fiscal year 1983?

Answer: Our additional capability is $500,000.

TVA's pioneering efforts in developing computer-based technology is on the verge of providing a national breakthrough in improved forest management. Additional computerized programs could be developed for the use of State forestry agencies, consulting foresters, and forest industries. With some additional assistance from TVA, two more Valley States' agencies could become users of the new technology in 1983.

Over 60 percent of the Tennessee Valley is forested. This abundant renewable resource can be a critical tool in efforts to revise a downward spiraling economy. TVA has the capability to help improve the productivity of existing industries and could help establish new forest industries and develop new markets for their products.

RATES

Question: How do TVA residential rates compare with neighboring utilities? With utilities nationwide?

Answer: In general, TVA residential electric rates are lower than those charged by most southeastern power systems. In 1981 TVA residential rates were about 75 percent of the average rate paid by residential consumers nationwide.

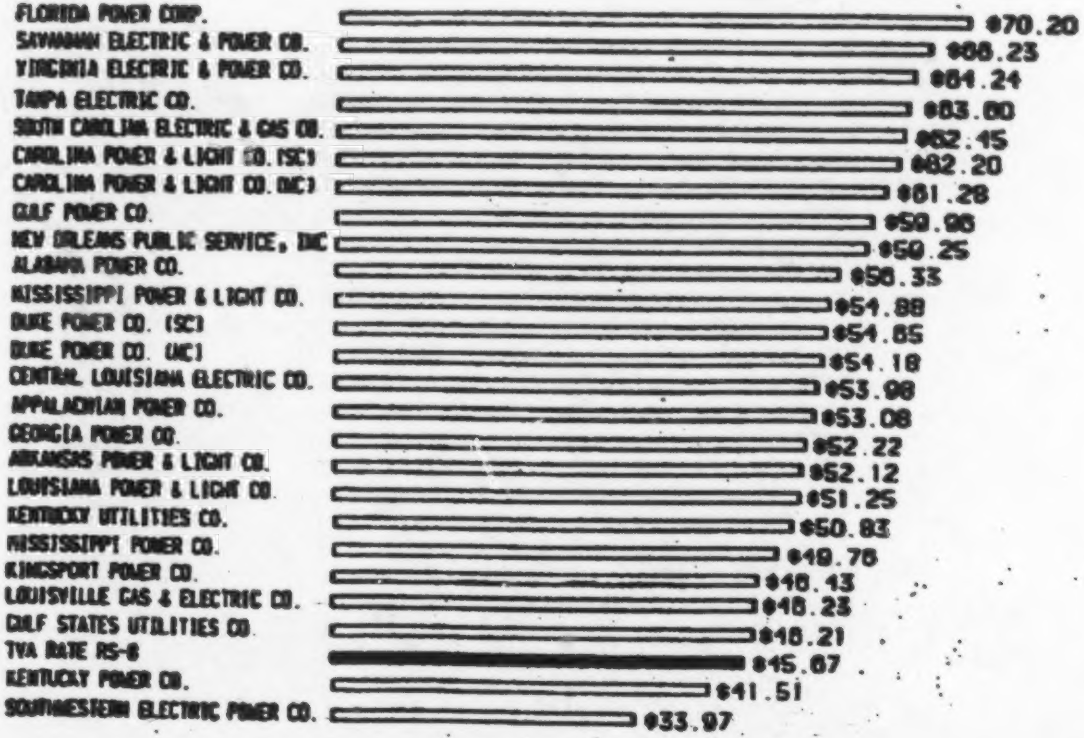
The attached exhibit provides a comparison of TVA residential rates with the rates of other southeastern utilities.

Question: How do TVA industrial rates compare with neighboring utilities? With utilities nationwide?

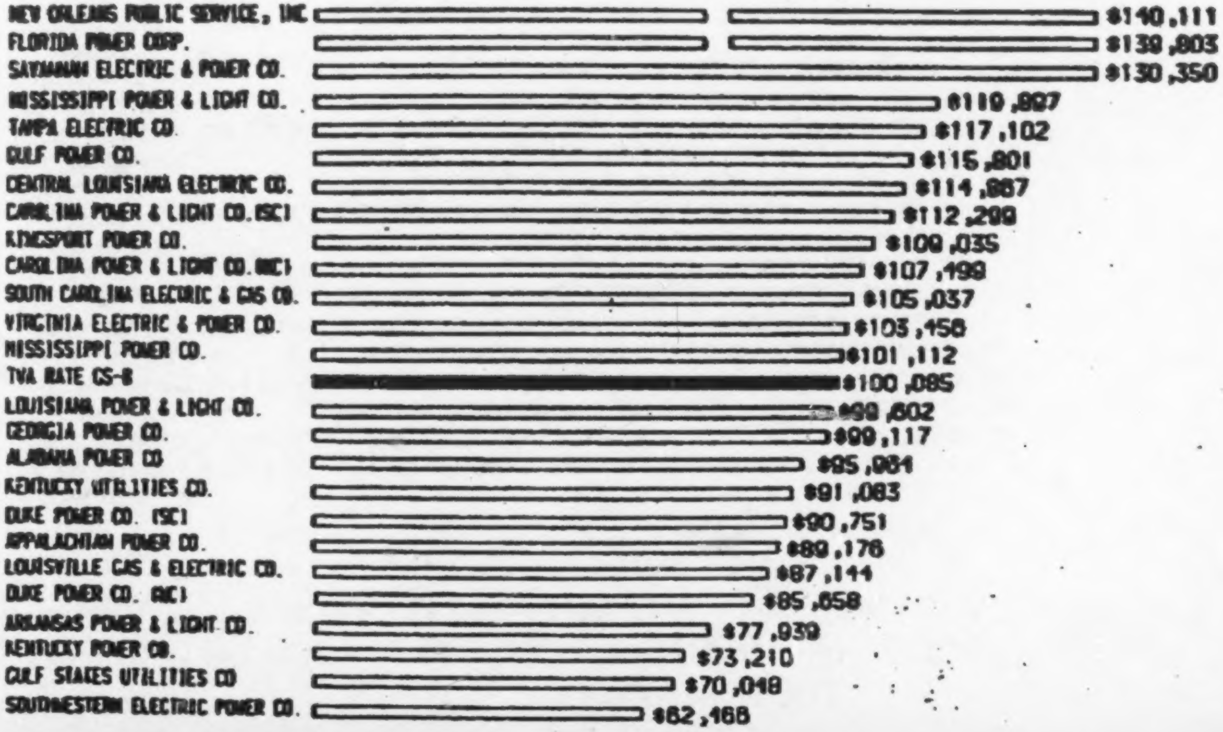
Answer: TVA electric rates for industrial consumers are about the same as comparable charges applicable by other southeastern power systems. Some neighboring utilities are lower; others are higher. TVA's rates were about 94 percent of the average rate paid by industrial consumers nationwide.

The attached exhibit provides a comparison of TVA industrial rates (5,000-kW demand) with the rates of other southeastern utilities.

JANUARY 1982
COMPARISON OF RESIDENTIAL POWER COSTS TVA AND UTILITIES IN THE SOUTHEASTERN U.S.
1,000 KWH



JANUARY 1982
COMPARISON OF INDUSTRIAL POWER COSTS
TVA AND UTILITIES IN THE SOUTHEASTERN U.S.
5,000 KW AND 2,555,000 KWH



RATES

Question: What are the prospects for rate increases in the next 12 months? As you know, your revenue projections have led to speculation that a rate increase of as much as 16 percent may be imposed in October. Is this a valid projection? What will be factors in keeping that increase down?

Answer: We expect to have a rate increase effective in October 1982 and we are committed to the goal of only one rate increase in fiscal year 1983 of no more than 10 percent. The 16 percent number is, as you note, a projection of what our revenue requirements might be under seriously adverse conditions, such as low hydro generation, higher interest rates, or a high inflation rate.

On the other hand, very favorable conditions in 1982 could result in an increase as low as 5 percent. On the basis of current information and normal conditions, the goal of only one increase of about 10 percent for fiscal year 1982 appears to be achievable.

SUBCOMMITTEE RECESS

Senator SASSER. With that, gentlemen, we will bring this hearing to an end. The subcommittee will stand in recess until tomorrow at 2 p.m. in room 1114.

[Whereupon, at 3:31 p.m. Tuesday, March 23, the subcommittee was recessed to reconvene at 2 p.m. Wednesday, March 24.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

WEDNESDAY, MARCH 24, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2:05 p.m. in room 1114, Everett McKinley Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senator Hatfield.

NUCLEAR REGULATORY COMMISSION

STATEMENT OF NUNZIO J. PALLADINO, CHAIRMAN

ACCOMPANIED BY:
- COMMISSIONER GILINSKY
- COMMISSIONER ROBERTS
- WILLIAM J. DIRCKS, EXECUTIVE DIRECTOR FOR OPERATIONS
- ED CASE, DEPUTY DIRECTOR, OFFICE OF NUCLEAR REACTOR REGULATION

SUBCOMMITTEE PROCEDURE

Chairman **HATFIELD**. The hearing will come to order.

Today, we will receive the testimony from the Nuclear Regulatory Commission and the Federal Energy Regulatory Commission regarding their fiscal year 1983 budget requests. The subcommittee has always shown a great interest in the programs and activities of both these regulatory agencies and we look forward to your testimony this afternoon.

As our first witness, we are pleased to have Dr. Nunzio J. Palladino, Chairman of the Nuclear Regulatory Commission.

PREPARED STATEMENT

Chairman Palladino, this is your first appearance, I believe, before this committee and we extend to you a very special welcome today. Your full written statement will be included in the record.

[The statement follows:]

STATEMENT OF NUNZIO J. PALLADINO

Mr. Chairman, I appreciate this opportunity to discuss with you today the Nuclear Regulatory Commission's fiscal year 1983 budget request. This is my first opportunity to appear before this subcommittee as Chairman of the NRC and I am most pleased to be here. I know that this subcommittee has had a continuing interest in the activities of the Commission and that your confidence and support are vital to our efforts to assure the licensing and safe operation of nuclear powerplants.

In my view, the budget is simply the agency's financial plan for implementing a given set of objectives. Recently, the Commission adopted such a set of major objectives, which have been approved as part of its "Policy and Planning Guidance" document—commonly known as the PPG within the agency. While not intended to be all-encompassing, this document provides guidance to the staff for establishing priorities and for improving the regulatory process. Goals are stated as policy statements and are supplemented by specific planning guidance for their achievement. Programing and budgeting are to be based on the PPG unless it is specifically superseded or amended. Copies of the PPG have already been provided the subcommittee. Before summarizing our fiscal year 1983 budget request, I would like to take a few moments to discuss some of the major concerns and goals of the Commission, particularly those identified in the PPG.

SAFE OPERATIONS

First and foremost in our priorities is the fundamental task of assuring that existing nuclear powerplants and those coming on line are and will be operated safely. A number of new approaches to this task have evolved in recent years, particularly since the accident at Three Mile Island. I have in mind such developments as the use of resident inspectors at operating facilities and construction sites; the new focus on human factors, exploring and deepening our understanding of the man-machine interface in nuclear operations; the strengthened emphasis on quality control; the formulation of an agency safety goal; and the use of probabilistic risk assessment. We will continue to pursue these approaches and to search diligently for others as the safe operation of nuclear powerplants is, and must always be, our highest priority.

In this context, I believe that the safe operation of nuclear powerplants has also been enhanced by the determined effort, involving both the NRC and the nuclear industry, to search out the full significance of operating experience. In an important and responsible move after the accident at TMI, the nuclear industry established the Institute of Nuclear Power Operations (INPO) to carry on its own analysis of operational data. The NRC entered into an agreement for cooperation with INPO for the exchange of operational information. Together we intend to learn well the lessons that only actual operating experience can teach and to communicate what has been learned in a timely fashion to all concerned.

QUALITY ASSURANCE

Quality of construction ranks alongside quality of design in assuring the safe operation of a nuclear powerplant. In view of the relatively large number of construction-related deficiencies that have come to light recently, it is apparent that both industry's and NRC's performance in the area of quality assurance can stand improving. The Commission has given an improved quality assurance program high priority for the years ahead. The Commission's inspection and enforcement activities have been strengthened by an increased use of resident inspections, an enhanced role for the regional administrators, and adoption of a firm but fair enforcement policy. The staff has undertaken a comprehensive review of its own quality assurance efforts and will propose an agencywide plan for improvements.

NRC inspectors inspect only a small fraction of total construction activity. Primary reliance for proper inspection and construction must be on the licensees themselves. In my remarks to the nuclear industry, I have tried to emphasize that all utilities who own or are building reactors must identify deficiencies early so that they don't creep into the final product or cause extensive and costly construction delays.

NEAR-TERM LICENSING PROBLEMS AND RESPONSES

Last year at this time there was widespread concern about the delays likely to be experienced by utilities in obtaining operating licenses for physically completed nuclear powerplants.

These estimates of potential delay have been greatly reduced in the past year. Revisions in applicant construction completion schedules were a major factor in reducing the projected delays. However, Commission actions played a role in reducing these estimates and in preventing unnecessary delays.

Let it suffice to say that the Commission believes that the measures it has taken to date have improved the efficiency of the licensing process without being detrimental to safety or impairing the right of effective public participation. We will continue to seek ways to eliminate all unwarranted delay in reaching licensing decisions. At the same time, pressure to issue new licenses will not be allowed to compromise safety.

LONG-TERM LICENSING REFORMS

In addition to taking actions to address near-term problems in the licensing proceses, the Commission has been looking for long-term improvements which could be made. A great deal of study and attention has already been given to proposals for streamlining and improving the licensing process for nuclear powerplants. Last November, I announced the formation of an NRC regulatory reform task force to make a detailed evaluation of these proposals and to submit recommendations to the Commission for both legislative and administrative changes. We will keep you apprised of our efforts in this area.

COORDINATING REGULATORY REQUIREMENTS

The Commission is sensitive to the criticism that there has been a large volume of new requirements imposed on licensees, that frequently these requirements have not been adequately coordinated, and that sufficient time has not always been allowed for their proper implementation.

In order to instill needed discipline into the regulatory process, the Commission has created a high-level Committee to Review Generic Requirements, chaired by a new Deputy Executive Director for Regional Operations and Generic Requirements.

Strong measures will be taken to control the issuance of new requirements so as to assure that priority is given to those with the greatest safety significance and that licensees are not burdened with unwarranted requirements. Conflicting priorities will be resolved in favor of those which offer the greater potential for reducing overall risk. Requirements which offer only the possibility of incremental reductions in residual risk will be judged on a cost-benefit basis.

NEW REGULATORY TOOLS

To assist in evaluating new and existing regulatory requirements, the Commission has undertaken to develop a safety goal and related safety guidance. We have focused initial emphasis on the individual and societal risks that might arise from reactor accidents, with a view to developing a general approach to risk acceptability and safety-cost tradeoffs. To the extent possible, we seek to identify specific qualitative safety goals and quantitative guidance and standards to apply in the review of rules and practices. This is a difficult task, but one which the majority of the Commission feels is worth attempting. On February 17, 1982, the Commission published in the Federal Register a proposed safety goal for public comment.

Probabilistic risk assessment techniques can provide a means for determining that the safety goal is met. The Commission has directed that special attention should be given to using probabilistic assessment techniques where the data warrants such use. For example, such techniques may be especially useful in licensing reviews, addressing generic safety issues, formulating new regulatory requirements, assessing and revalidating or eliminating existing regulatory requirements, evaluating new designs, and in formulating reactor safety research and inspection priorities.

Recent research has indicated that the radioactive source term, now being used to assess the types and amounts of radioactivity which might be dispersed in various nuclear accident scenarios, may be unduly conservative. A more realistic source term could, among other things, lessen the demands on site emergency plans. A reassessment of the source term is underway and should be completed by early 1983.

Reassessment of the source term and formulation of a safety goal will assist the Commission in establishing better siting criteria for nuclear powerplants and other major nuclear facilities. The Commission believes that these criteria need to be improved. However, we do not wish to promulgate comprehensive, new siting regulations until we have finally defined our safety goal and until a better characterization of the radioactive source term can be made.

NUCLEAR WASTE MANAGEMENT

Beyond the regulation of nuclear powerplants, the NRC must play a critical supporting role in the urgent national effort to solve the problem of nuclear waste. The Commission intends to plan and organize its waste management regulatory activities so as to be consistent with the program of the executive branch as approved by Congress and so as not to delay implementation of that program in the absence of unresolved safety concerns. Our efforts will focus on the review of Department of Energy (DOE) site characterization activities and the development of methods to implement licensing criteria for high-level waste repositories. We expect to publish a final rule covering the technical criteria for licensing high-level repositories before January 1983.

To provide additional storage space for spent fuel collecting at operating reactor sites, many NRC licensees have, with NRC approval, altered the deployment of spent fuel elements in their onsite storage pools to make space for future deposits. Some elements have had to be stored away from their site of origin. Present indications are that existing storage pools can be modified to accommodate spent fuel until about the mid-1980's. After that time, new storage capacity may be needed, involving new pools or the use of dry storage technology. We are preparing to review industry or government proposals for new storage capacity, whatever its form.

In order to license nuclear powerplants, the Commission must make a judgment as to the safety and environmental soundness of the rest of the nuclear fuel cycle, including waste management. In October 1979, the Commission initiated a rulemaking to (1) assess generically the degree of Commission confidence that radioactive wastes can be disposed of safely; (2) determine when disposal or offsite storage facilities would be available; and (3) determine whether or not wastes can be safely stored onsite beyond the expiration of existing licenses until offsite storage or disposal is available. The Commission is moving expeditiously to complete this waste confidence proceeding.

TMI-2 CLEANUP

One of our highest priorities is the prompt cleanup of Three Mile Island unit 2. The content of the containment at TMI-2 remains a potential public health and safety hazard. That fact was underscored a few weekends ago when false readings indicating a hydrogen buildup in the containment activated emergency response measures and captured nationwide media attention.

Although the primary responsibility for cleanup is the utility's, we intend to assure the thorough decontamination of the plant and the timely and safe removal of radioactive waste products from the site. In this regard, the Commission supports the recent Department of Energy (DOE) decision to take custody of the entire damaged core.

Uncertain funding is still an obstacle to cleanup. Some combination of sources for funding the cleanup is probably the most viable and equitable approach to take. The Commission endorses no specific funding plan. However, I do wish to stress our deep-seated concern that cleanup be conducted in the most expeditious manner.

IAEA SAFEGUARDS

One final subject merits special mention—international safeguards.

In recent months, the Commission has conveyed to Congress our concerns about the adequacy of the International Atomic Energy Agency (IAEA) safeguards system to detect in a timely fashion at least some types of diversion. We believe that IAEA safeguards have improved in recent years, and that efforts should be made to continue this improvement as rapidly as possible. To the extent that our resources permit, we are prepared to assist the executive branch in strengthening the IAEA safeguards program.

I would like now to summarize briefly the most significant aspects of our fiscal year 1983 budget.

THE BUDGET REQUEST

As the table at the end of my testimony indicates, our requests total $479.5 million and 3,303 full-time employees which amounts to $4.7 million more than our fiscal year 1982 funding and 22 fewer staff. Although the total proposed funding is slightly increased, when the impact of inflation is accounted for, this request represents a net decline in overall agency funding. We have tried to achieve efficiencies in our operation wherever possible to offset this decline.

Mr. Chairman, recognizing that there are always activities that could be accomplished faster and better with increased support, our budget request represents a level of funding that will enable us to meet our highest priority commitments in a timely and effective manner. On balance, we have a reasonable reallocation of resources to each of the major NRC programs.

I will summarize the most significant activities within each major program in order to provide a rationale for our budget and to give you an overview of program expansions and reductions. Table 1 shows the staffing and funds needed for each of our major programs.

NUCLEAR REACTOR REGULATION

The table shows that the largest increase in our budget request is for the Office of Nuclear Reactor Regulation (NRR).

We propose to increase the resources in NRR devoted to resolution of safety issues and processing amendments to operating reactor licenses. We also propose to increase resources devoted to reactor operator examinations and to developing better operator qualifications standards. Timely attention to these areas will help assure the safe operation of nuclear powerplants.

NRR is also responsible for the systematic evaluation program (SEP) and the national reliability evaluation program (NREP) which have been developed to reassess the design and operation of operating reactors. Following the successful completion of SEP phase II, the systematic review of the 10 oldest nuclear plants, SEP phase III would begin in fiscal year 1983 a systematic review of the remaining plants. We propose to initiate the complementary NREP risk assessment studies in fiscal year 1983.

A major function of NRR involves the technical review of reactor license applications. Our budget is based on the planning assumption that by 1983 we will be able to reduce the NRR resources devoted to processing applications and still complete reviews without impacting the scheduled fuel loading and operation of new plants. While I am hopeful this assumption will prove correct, there is always the possibility that slippages of plants scheduled for completion in 1982 could cause an increase in our assumed 1983 workload.

In fiscal year 1983, NRR would continue the licensing review of the Clinch River Breeder Reactor initiated several months ago. The resources requested would allow us to keep pace with the DOE construction schedule.

INSPECTION AND ENFORCEMENT

As the attached table indicates, we have provided the Office of Inspection and Enforcement (IE) with increased resources. This increase would provide inspection coverage of the new operating reactors coming on line and contractual assistance to perform initial one-time inspections to evaluate compliance with the new fire protection and facility safeguards rules.

Our budget for IE also contains funds to initiate construction of an inspector training center at the Tennessee Valley Authority site near Chattanooga, Tenn. This facility will enhance our ability to maintain a well-trained inspection force.

NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

The budget submission shows a decline in resources allocated to the Office of Nuclear Materials Safety and Safeguards (NMSS). This decline includes reductions in funding for the safeguards and waste management programs. Some of the reduction in NMSS's waste management program is matched by an increase in funding for waste management research conducted by the Office of Nuclear Regulatory Research. Overall, the agency resources devoted to waste management in fiscal year 1983 would remain at about the current level.

Our fiscal year 1983 program would continue the development of a computerized licensing management system so that NMSS can eliminate much of the inefficient manual processing in some 6,000 material licenses annually.

NUCLEAR REGULATORY RESEARCH

While the magnitude of the funding reduction between fiscal year 1982 and fiscal year 1983 in our research program is relatively small, we propose significant changes in the goals of the research activities. Major activities that would increase are those associated with prevention and mitigation of certain accidents, application of risk analysis, and human factors.

Our focus in fiscal year 1983 would be on the prevention and mitigation of accidents which could lead to severe core damage as occurred at TMI.

We believe risk assessment techniques can significantly improve our analysis of reactor safety questions. We propose to dedicate increased resources in fiscal year 1983 to the development of a user's guide for the application of risk assessment methodologies in the licensing process.

One of the lessons learned from TMI is the importance of human factors to the safe operation of nuclear reactors. The fiscal year 1983 human factors research program would increase over the fiscal year 1982 budget. The expanded effort would be directed toward gaining a better understanding of the man-machine interface and developing ways to lessen the potential for the human factor to degrade safety.

We have looked carefully at our research program to be sure we were devoting sufficient effort to support of the Clinch River Breeder Reactor (CRBR) license application. We are coordinating with DOE to avoid duplicative activities.

Our research program would allow the completion of the scheduled loss of fluid test (LOFT) tests in fiscal year 1983. In fiscal year 1982 and fiscal year 1983 the LOFT testing would include the testing program required by Congress.

PROGRAM TECHNICAL SUPPORT

Program technical support (PTS) includes those offices that support our licensing hearings, interface with State and foreign governments, and perform analyses of operating reactor data. The increased funding would provide for an automated system for tracking, identifying, and correlating operating reactor experience data.

PROGRAM DIRECTION AND ADMINISTRATION

The program direction and administration (PDA) offices collectively provide overall policy direction, resources management, administration, and logistic support for the agency. There would be a net reduction of 41 staff in the PDA offices.

In addition, we propose to make greater efforts to coordinate our programs with those of other Government agencies and the industry. For example, our funding for high-level waste management reflects increased reliance on DOE's high-level waste management efforts. We are working closely with the Federal Emergency Management Agency to develop and implement effective emergency planning requirements for licensed facilities. We are evaluating and will use work done by the INPO for the development of standards in the human factors area.

At this point, I should note that—despite repeated efforts on our part to obtain a solution—the agency is still widely dispersed around the metropolitan Washington area. There is now a strong probability that we will not be allowed to consolidate in the near future. Consolidation of NRC headquarters would greatly improve the efficiency of the organization in the day-to-day operations as well as our effectiveness in responding to emergencies such as the recent Ginna incident.

As a final point, I see the next few years as a period of budget stabilization for the Nuclear Regulatory Commission. While our license application caseload activities may start to decline, our caseload of operating reactors to be monitored will increase.

This completes my statement, Mr. Chairman. I would be pleased to answer any questions you may have.

FISCAL YEAR 1983 PRESIDENT'S BUDGET—OFFICE LEVEL BREAKOUT

Summary data	Estimate fiscal year 1982	Estimate fiscal year 1983	Change
NRR:			
People	702	738	+36
Amount	$87,015	$93,120	+$6,105
I. & E.:			
People	985	995	+10
Amount	$66,234	$69,850	+$3,616
NMSS:			
People	320	308	-12
Amount	$38,917	$37,385	-$1,532
RES:			
People	295	283	-12
Amount	$222,663	$219,725	-$2,938
PTS:			
People	308	305	-3
Amount	$22,612	$23,400	+$788
PDA:			
People	715	674	-41
Amount	$37,359	$36,020	-$1,339
Total people	3,325	3,303	-22
Total amount	$474,800	$479,500	+$4,700

INTRODUCTION OF ASSOCIATES

Chairman HATFIELD. If you will please introduce your colleagues who accompany you, you may handle your testimony in a summary fashion or highlight it as you wish. We are happy again, as I say, to welcome you to this your first hearing before this committee.

Mr. PALLADINO. Thank you very much, Mr. Chairman.

I appreciate this opportunity to discuss with you today the Nuclear Regulatory Commission's fiscal year 1983 budget request. I am accompanied by two of my fellow Commissioners, Commissioner Gilinsky and Commissioner Roberts.

Chairman HATFIELD. Welcome, gentlemen.

Mr. GILINSKY. Thank you, Mr. Chairman.

Mr. PALLADINO. As you know, this is my first opportunity to appear before the subcommittee as Chairman of the NRC and I am most pleased to be here. I know that this subcommittee has had a continuing interest in the activities of the Commission and that your confidence and support are vital to our efforts to assure the licensing and safe operation of nuclear powerplants.

MAJOR POLICY AND PLANNING GOALS

In my view, the budget is simply the agency's financial plan for implementing a given set of objectives. Recently, the Commission adopted such a set of major objectives, which have been approved as part of its policy and planning guidance document. Before summarizing our fiscal 1983 budget request, I would like to take a few moments to discuss some of the major concerns and goals of the Commission, particularly some of those identified in the policy and planning guidance document.

First and foremost in our priorities is the fundamental task of assuring that existing nuclear powerplants and those coming on line are and will be operated safely. A number of new approaches to this task have evolved in recent years, such as the use of resident inspectors; the new focus on human factors; the strengthened emphasis on quality control; the formulation of an agency safety goal; and the use of probabilistic risk assessment. We will continue to pursue these approaches and to search diligently for others.

Quality of construction ranks alongside quality of design in assuring the safe operation of a nuclear powerplant. In view of the relatively large number of construction-related deficiencies that have come to light recently, it is apparent that both industry's and NRC's performance in the area of quality assurance can stand improving. The Commission has given an improved quality assurance program high priority for the years ahead. The Commission's inspection and enforcement activities have been strengthened by the increased use of resident inspections, an en-hanced role for the regional administrators, and adoption of a firm, but fair enforcement policy. The staff has undertaken a comprehensive re-view of its own quality assurance efforts and will propose an agencywide plan for improvements.

LICENSING PROCESS

Last year at this time there was widespread concern about the delays likely to be experienced by utilities in obtaining operating licenses for completed nuclear powerplants. These estimates of potential delay have been greatly reduced in the past year. Revisions in applicant construction completion schedules were a major factor in reducing the projected delays. However, Commission actions played a role in reducing these estimates and in preventing unnecessary delays.

The Commission believes that the measures it has taken to date have improved the efficiency of the licensing process without being detrimental to safety or impairing the right of effective public participation. We will continue to seek ways to eliminate all unwarranted delay in reaching licensing decisions. At the same time, pressure to issue new licenses will not be allowed to compromise safety.

The Commission is sensitive to the criticism that there has been a large volume of new requirements imposed on licensees, that frequently these requirements have not been adequately coordinated, and that sufficient time has not always been allowed for their proper implementation.

In order to instill needed discipline into the regulatory process, the Commission has created a high-level committee to review generic requirements, chaired by the new Deputy Executive Director.

Strong measures will be taken to control the issuance of new requirements so as to assure that priority is given to those with the greatest safety significance and that licensees are not burdened with unwarranted requirements.

To assist in evaluating new and existing regulatory requirements, the Commission has undertaken to develop a safety goal and related safety guidance. This is a difficult task, but one which the majority of the Commission feels is worth attempting.

RISK ASSESSMENT

Probabilistic risk assessment techniques can provide a means for determining that the safety goal is met. The Commission has directed that special attention should be given to using probabilistic assessment techniques where the data warrants such use.

A more realistic radioactive source term could, among other things, lessen the demands on site emergency plans. A reassessment of the source term is underway and should be completed by early 1983.

Reassessment of the source term and formulation of a safety goal will assist the Commission in establishing better siting criteria for nuclear powerplants and other major nuclear facilities. The Commission believes that these criteria need to be improved. However, we do not wish to promulgate comprehensive, new siting regulations until we have finally defined our safety goal and until a better characterization of the radioactive source term can be made.

Beyond the regulation of nuclear powerplants, the NRC must play a critical supporting role in the urgent national effort to solve the problem of nuclear waste. The Commission intends to plan and organize its waste management regulatory activities so as to be consistent with the program of the executive branch as approved by Congress and so as not to delay implementation of that program in the absence of unresolved safety concerns.

TMI CLEANUP

One of our highest priorities is the prompt cleanup of Three Mile Island, unit 2. The content of the containment at TMI–2 remains a potential public health and safety hazard.

Uncertain funding is still an obstacle to cleanup. Some combination of sources for funding the cleanup is probably the most viable and equitable approach to take. The Commission endorses no specific funding plan. However, I do wish to stress our deep-seated concern that cleanup be conducted in the most expeditious manner. The Commission supports the recent DOE decision to take custody of the entire damaged core.

SUMMARY OF BUDGET REQUEST

I would like now to summarize briefly the most significant aspects of our fiscal 1983 budget.

Our requests total $479.5 million and 3,030 full-time employees, which amounts to $4.7 million more than our fiscal year 1982 funding and 22 fewer staff. Although the total proposed funding is slightly increased, when the impact of inflation is accounted for, the request represents a net decline in overall agency funding. We have tried to achieve efficiencies in our operation wherever we possibly can to offset this decline.

Mr. Chairman, recognizing that there are always activities that could be accomplished faster and better with increased support, our budget request represents a level of funding that will enable us to meet our highest priority commitments in a timely and effective manner. On balance, we have a reasonable allocation of resources to each of the major NRC programs.

My statement submitted for the record summarizes the most significant activities within each major program in order to provide a rationale for out budget and to give you an overview of program expansions and reductions. Table 1 shows the staffing and funds needed for each of our major programs.

NUCLEAR REACTOR REGULATION

The table shows that the largest increase in our budget request is for the Office of Nuclear Reactor Regulation.

We propose to increase the resources in NRR devoted to resolution of safety issues and processing amendments to operating reactor licenses. We also propose to increase resources devoted to reactor operator examinations and to developing better operator qualifications standards.

Our budget is based on the planning assumption that by 1983 we will be able to reduce the NRR resources devoted to processing applications and still complete reviews without impacting the scheduled fuel loading and operation of new plants. While I am hopeful this assumption will prove correct, there is always the possibility that slippages of plants scheduled for completion in 1982 could cause an increase in our assumed 1983 workload.

OFFICE OF INSPECTION AND ENFORCEMENT

We have provided the Office of Inspection and Enforcement with increased resources for inspection coverage of the new operating reactors coming on line and constructual assistance to perform initial one-time inspections to evaluate compliance with the new fire protection and facility safeguards rules.

NUCLEAR MATERIALS SAFETY AND SAFEGUARDS

The budget submission shows a decline in resources allocated to the Office of Nuclear Materials Safety and Safeguards. Some of the reduction in NMSS's waste management program is matched by an increase in funding for waste management research conducted by the Office of Nuclear Regulatory Research. Overall, the agency resources devoted to waste management in fiscal 1983 would remain at about the current level.

While the magnitude of the funding reduction between fiscal year 1982 and fiscal year 1983 in our research program is relatively small, we propose significant changes in the goals of the research activities. Major activities that would increase are those associated with prevention and mitigation of certain accidents, application of risk analysis, and human factors.

Our research program would allow the completion of the scheduled LOFT tests in fiscal year 1983.

The increased funding for program technical support would provide for an automated system for tracking, identifying, and correlating operating reactor experience data.

There would be a net reduction of 41 staff in the Program Direction and Administration Offices.

HEADQUARTERS CONSOLIDATION

At this point, I should note that, despite repeated efforts on our part to obtain a solution, the agency is still widely dispersed around the Metropolitan Washington area. There is now a strong probability that we will not be allowed to consolidate in the near future. Consolidation of NRC headquarters would greatly improve the efficiency of the organization in our day-to-day operations as well as our effectiveness in responding to emergencies such as the recent Ginna incident.

As a final point, I see the next few years as a period of budget stabilization within the Nuclear Regulatory Commission. While our license application caseload activities may start to decline, our caseload of operating reactors to be monitored will increase.

Mr. Chairman, this completes my prepared statement. We would be pleased to answer any questions you may have. In addition to my fellow Commissioners, with me today I have a number of key staff people that can assist in responding to questions.

Chairman HATFIELD. Thank you, Chairman Palladino.

Since there is a vote in progress, I will declare a 10-minute recess while I go vote.

[A brief recess was taken.]

Chairman HATFIELD. The hearing will resume. I apologize for the delay.

LICENSING REVIEW

Mr. Chairman, last year there seemed to be concern on the part of some over delays in both construction permits and operating licenses for nuclear powerplants. NRC testimony indicated that most, if not all, of the additional review was due to new safety requirements that had been developed as a result of Three Mile Island. Can you give us a status report on the new requirements that have been developed and the need for them?

Mr. PALLADINO. Mr. Chairman, one of the concerns that we have had in the Commission recently has been the fact that we have been imposing a number of new requirements in a variety of ways on the industry. To try to cope with that problem we have created a committee to review generic requirements that we place on the utilities. By generic, I mean reactors of a given class not a specific reactor. I think that that is beginning to have an impact on making sure that the requirements we place on the industry are effective in terms of safety.

Mr. GILINSKY. If I can add to that.

Chairman HATFIELD. Commissioner Gilinsky.

Mr. GILINSKY. We insisted on certain requirements that we consider most important, these being the ones with the highest priority. However, in looking over the rest of the requirements, we tried to take into account the effect on the licensees of being flooded with too many of these requirements and tried to pace them, to some extent, and arrange their schedules in such a way that the result will be better than if they all came at once. But we are pursuing those that we consider to be important.

Chairman HATFIELD. Let me pursue this a little bit further. You have indicated in your testimony that the estimates of potential delay in obtaining licenses has been greatly reduced in the past year. Now what did the Commission do exactly, or precisely, to reduce the potential delays, and can you quantify for us, somehow, the improvement in that reduction or what the result of reducing those delays has resulted in?

Mr. PALLADINO. Well, there have been two sources of action for getting delays reduced. One has been the fact that the construction schedules of the utilities have slipped and the other has been the efforts of the NRC. The major effort of NRC is to bring more staff power to the preparation of the safety evaluation report and to cause the hearing boards to control the hearings so that they do not take as much time as they have in the past. The staff estimates that about 30 percent of the reduction in delays has been due to NRC efforts and about 70 percent due to the slippage of construction schedules.

IMPACT ON SAFETY

Chairman HATFIELD. But in this effort and in the clamor to speed up the licensing procedure you have not sacrificed safety?

Mr. PALLADINO. No, sir. As a matter of fact, we tried to make sure that we did not reduce safety and wherever possible enhance our activities so that safety is comparably assured as it has been in the recent past.

Mr. GILINSKY. If I could add, Mr. Chairman, there is a certain shift in priorities. I think that is unquestionable. But the reduction in these delays comes, as the Chairman says, principally from the fact that the original estimates were faulty. They were based on schedules from the applicants and licensees, and these schedules were simply inaccurate and overly optimistic. As we developed more realistic schedules, it turned out these plants were not going to be finished when the applicants thought they would be, and that, in fact, we could work apace with those schedules.

Chairman HATFIELD. Commissioner Roberts, you are welcome to chime in here.

Mr. ROBERTS. Thank you. I would only agree with the Chairman. I do not think the NRC has diminished its safety efforts in any way in the use of its resources.

Chairman HATFIELD. It would really be an issue difficult to prove.

Mr. PALLADINO. Whether or not we have impacted on safety?

Chairman HATFIELD. How would you check against that kind of possibility?

Mr. PALLADINO. Well, to make sure that the safety evaluation reports are effectively done, that the analyses are well done, we have improved techniques for handling a number of analyses and they are confirmed by better test data than, for example, we had in the past. The hearing boards have been able to do a better job of controlling their hearings without adversely affecting the public input or addressing the issues that are involved.

In truth, it is difficult to measure. But I have a feeling of confidence that we actually have improved the situation rather than have worsened it.

CLINCH RIVER BREEDER REACTOR

Chairman HATFIELD. Gentlemen, I believe that DOE has requested that you speed up the licensing for Clinch River; is that correct? Am I correct in that?

Mr. GILINSKY. They made a request for an exemption from one of our regulations, Mr. Chairman.

Chairman HATFIELD. In order to accelerate the licensing process?

Mr. GILINSKY. To permit them to start ground clearance and other activities earlier than they would have been able to otherwise.

Chairman HATFIELD. Well, the Commission recently voted 3 to 2 to deny DOE's request for an exemption from normal procedures so that site preparation activity could begin at the Clinch River project; is that correct?

Mr. PALLADINO. Yes.

FUNDING REQUEST FOR CRBR

Chairman HATFIELD. What level of support and funding is planned for fiscal year 1982 and what is contained in the budget request for fiscal year 1983 regarding the whole matter of Clinch River?

Mr. PALLADINO. There are two activities that are budgeted in our budget; one having to do with research associated with Clinch River, and that is budgeted, I think, at $10.5 million. The other activity has to do with the licensing and analysis that would be associated with licensing. I forget how many people we have budgeted for that.

Chairman HATFIELD. Could we get a budget figure?

Mr. PALLADINO. Mr. Dircks, our Executive Director for Operations, is here and can probably respond.

Mr. DIRCKS. We have about 14 staff-years allocated to do the licensing work on Clinch River activities.

Chairman HATFIELD. That is fiscal year 1982?

Mr. DIRCKS. No sir; that is fiscal year 1983. In fiscal year 1982 we have about 25 staff-years allocated to that project.

Chairman HATFIELD. Give me those figures again. For fiscal year 1982 you have?

Mr. DIRCKS. Twenty-five staff-years.

Chairman HATFIELD. And fiscal year 1983?

Mr. DIRCKS. About 14 staff-years.

Chairman HATFIELD. So you are speeding up the licensing procedure by reducing the staff-years.

Mr. DIRCKS. Right now we are maintaining a relatively normal schedule on the licensing of Clinch River. The Commission did not vote to grant the exemption to allow the speedup.

Chairman HATFIELD. There were no other ways besides the matter of exemption that you would be able to speed up or accelerate the licensing procedure?

Mr. PALLADINO. That was the path that the DOE chose to try to get the development activities started before they were ready to proceed with other aspects.

Mr. Dircks reminds me we do have a project office dedicated to the Clinch River activities.

TMI—OPEN ISSUES

Chairman HATFIELD. I understand that there are what you call open issues identified from the previous review of the new Three Mile Island related requirements which must be considered. Can you describe generally some of these issues and give us an estimate of the time required to complete the review and issue the permit?

Mr. PALLADINO. Well, the activities that grew out of Three Mile Island were categorized in three categories; category 1 being the most urgent, category 2 being those that should be addressed next, and category 3 being those that seemed to be of low priority or, perhaps, may not need to be done at all. I think we are pretty well on target with the priority 1 items and are scheduled to handle about half of the category 2. For more detail, I might turn to Mr. Case from NRR who has handled this.

Mr. CASE. Senator, my name is Ed Case. I am Deputy Director of NRR.

The Chairman is exactly right. The TMI items were divided into three categories; those most urgent and those of lower urgency, as they apply to the startup of TMI-1, which I think was the specific focus of your question. There are some of the TMI items before the Commission that have to be completed before the plant can start up, TMI-1. They involve such things as adding water level instrumentation that we concluded was necessary as a result of the Three Mile Island accident. However, these are not the items that are pacing in the startup of the plant. About 2 months ago they discovered problems in their steam generator—that is, leaking tubes in their steam generator—and the repair of the steam generator is on the critical path for resuming operation. It is not the requirements that were required by the licensing board.

Mr. PALLADINO. Mr. Chairman, I wonder if I might just make sure that we are right on one statement Mr. Case made. He indicated that water level instrumentation was a prerequisite to startup of TMI-1. I believe what has to be shown is reasonable progress and that arrangements would be made to add that later.

Mr. CASE. Yes.

Chairman HATFIELD. Let me go back to this original part of my question about the identification of open issues that have arisen. What about open issues from earlier licensing, let's say activities before 1977?

Mr. PALLADINO. Are you speaking generally or——

Chairman HATFIELD. I am talking about Clinch River.

Mr. CASE. Now I understand.

Do you want to take that, Mr. Chairman, or should I?

Mr. PALLADINO. Could you repeat the question? I was thinking of a different thing.

CLINCH RIVER BREEDER REACTOR

Chairman HATFIELD. My initial question had to do with the open issues that related to the schedule for licensing Clinch River. You had indicated from the previous review that there were open issues related to Clinch River, and my question was, Could you describe generally what you call or identify as open issues and give us an estimate of the time required to complete the review and issue the permit?

Mr. CASE. I can give you examples. One example, Senator, was the so-called maximum hypothetical accident, what should be the size of the core disruptive accident assumed for the purpose of designing the containment. That was an open issue in our review in 1977 when the review was terminated because of the Carter administration's position on the CRBR. As part of our current review, DOE has provided us information on all of the list of open items we furnished them at the completion of our last review, and as part of our review process we are going over them.

Another one was the interaction between concrete and sodium should there be a spill from sodium in the primary system of the reactor. These are examples of the open issues.

COMPLETION OF LICENSING PROCESS

Chairman HATFIELD. All right, let me put it down this way as the bottom line. Assuming everything goes well with your present scheduling, when is the permit for Clinch River going to be issued?

Mr. CASE. With that caveat and everything going well, June 1984 would be when we would expect to reach a decision on that construction permit.

Chairman HATFIELD. June 1984?

Mr. CASE. Yes; June 1984.

Mr. PALLADINO. That is for construction purposes.

Mr. CASE. Yes.

Chairman HATFIELD. And that assumes that you are not going to grant the exemption requested by DOE?

Mr. CASE. Yes.

TMI CLEANUP

Chairman HATFIELD. Let me turn to Three Mile Island. I notice here you are requesting $315,000 in fiscal year 1983 under nuclear reactor regulation for direct Three Mile Island unit 2 cleanup. I assume that there are other funds in your request for TMI-related matters. Is that a correct assumption, and if it is, can you give me some idea how much has been spent by the NRC to date for this and related TMI activities?

Mr. PALLADINO. I think the funds that we have in there at the present time are primarily for the program office and for supporting the personnel here at headquarters.

With regard to how much we spent on TMI-2 cleanup, I would have to turn to some of my staff.

Chairman HATFIELD. You can supply that for the record.

Mr. PALLADINO. Yes.

Chairman HATFIELD. As you know, the Department of Energy has stated that the Federal role in this whole matter of the TMI cleanup is limited to what they call necessary R. & D., and that the cost of cleanup remains with the owner. Now that is what we have understood from DOE. Is that your understanding of the situation?

Mr. PALLADINO. More recently I think DOE has agreed to accept the complete damaged core. At one time they were speaking of only part of it.

Chairman HATFIELD. Yes; that was going to follow as my next question. In the acceptance of that damaged core by the DOE, does that, in your opinion, fall outside the concept of generic R. & D.?

Mr. PALLADINO. It is difficult to say, but I would guess it would. I think, though, it is essential for DOE to take the core, because there is no other place to put it. Once the vessel is open, the damaged core would be sitting there without the kind of protection that one expects for what one might call waste disposal. In a sense, without taking the core we would be letting the island become a waste disposal site and it would not meet any of the criteria anyone has spoken about as to what we should require of a waste disposal site. So I would surely endorse the DOE taking the complete core. In the process, though, we have not said who should pay for it, and I think that is an item that remains to be settled.

FINANCING CORE CLEANUP

Chairman HATFIELD. Should it be a reimbursable item to DOE?

Mr. PALLADINO. I think they may have that in mind. Our effort in this has been to assure the public health and safety. I do recognize that funding has become a critical element in cleaning up the island, but I think that we cannot continue to let that reactor sit there under conditions for which it wasn't designed, with the potential for other releases to the public. We should clean it up just as soon as we possibly can. I do think it may take more aggressive Federal action to get the financing plan developed, but I would encourage at least Federal initiative to see we develop such a plan.

Chairman HATFIELD. I have a feeling this is part of that chipping away. I have an impression or feeling there are all kinds of schemes floating around on how to chip away, shifting the burden of that basic cost back to the public or back to the Federal Government in some way. And I would hope that out of the willingness of the DOE to accept the damaged core that it would be clearly indicated that this would be a reimbursable expense.

Mr. PALLADINO. I think they have kept that as an option.

Chairman HATFIELD. Any other comments from Commissioners on this question of cost?

Mr. PALLADINO. Mr. Chairman, I can speak as an individual; I won't try to speak for the Commission. I do believe that we have a situation here where we must have the cost shared. I think that it will have to be shared in part by the people in the area. It has to be shared in part by the utility itself, by its insurance money. I believe that the nuclear industry has a role to play in that effort, and I do believe that Federal funds would be appropriate, but in some sort of balanced formula.

Chairman HATFIELD. You mean you are suggesting the Federal role be expanded to bear costs beyond the so-called R. & D. activities?

Mr. PALLADINO. I was hoping that we could develop a plan that would be complete, and I think what the Federal initiative could contribute would be developing the plan and getting the parties together.

I would personally be inclined to expand the Federal role beyond that for R. & D. as well, and here I speak as an individual.

Chairman HATFIELD. Through reprograming your own budget maybe?

Mr. PALLADINO. If we had enough money to reprogram, we certainly would consider that.

Mr. GILINSKY. Could I add a word, Mr. Chairman?

Chairman HATFIELD. Mr. Gilinsky.

Mr. GILINSKY. It seems to me that, as a Commission, we have expertise on the health and safety aspects of this problem and those aspects of the problem are our responsibility. There is a problem; it does have to be dealt with. And money is going to have to be found from some source to deal with it. As to who pays and how you allocate the various payments and what is fair, it seems to me that this is beyond both our responsibilities and our expertise.

Chairman HATFIELD. But let me ask you, wasn't there a Pennsylvania Utilities Commission decision recently that indicated that cleanup costs could be included in a rate base, increasing the rates and let the ratepayers assist in these cleanup costs? And I believe that the utility commission ruling or judgment was contingent on the restart of the undamaged unit at TMI-1.

Mr. PALLADINO. Yes, sir; they have recently made such a decision. As I recall, they tied it into TMI-1 getting up to 35-percent power.

TMI-1 STEAM GENERATOR PROBLEMS

Chairman HATFIELD. Are there obstacles in the restart of the TMI-1?

Mr. GILINSKY. Yes, there are, Mr. Chairman. It now looks, quite apart from our own proceeding, as if the plant is in some difficulty. There are problems with the steam generators quite apart from the requirement for permission from us, and the completion of a hearing, and so on, it does not appear that they will be operating any time soon.

Chairman HATFIELD. Well, then really the PUC hasn't said very much.

Mr. GILINSKY. Not for the near future.

Mr. PALLADINO. When they undertook that, I think the steam generator problem had not loomed as formidably as it looms now.

PSYCHOLOGICAL STRESS ISSUE

Incidentally, there are two—let me call them barriers—to the startup of TMI-1 besides the procedural one. The one Commissioner Gilinsky mentioned with regard to the steam generator tubes. But we also have a recent court decision that requires addressing the matter of psychological stress before TMI-1 could be restarted. We are awaiting the opinion of the court to determine what action, if any, we should be taking with regard to appealing the decision because we don't know how broad it is. Meanwhile, we are starting our staff on an environmental assessment so that we can comply with the court's requirements if they are not overturned.

COMPARATIVE COSTS OF ALTERNATE ENERGY SOURCES

Chairman HATFIELD. The whole idea of comparative total cost, as put forth by the great advocates of nuclear power development on such factors as cleanup, waste storage, and dismantling costs, is really a farce. I would be very interested, in light of some of these experiences, to see how cheap nuclear energy really is or how really expensive it is. I suppose you are familiar with our Washington Public Power System units 4 and 5 out in the Pacific Northwest. One of the reasons why I offered the amendment to the Northwest Energy Act is that all this cost analysis and comparison between nuclear power and other sources is a charade. The charade is we simply never computed the cost of waste storage, dismantling, or accidents cleanup. Let me assure you that when you do, I think we would take a much different approach to some of this great advocacy of expanding, proliferating nuclear reactors, nuclear power. I can tell you, Mr. Chairman, you are going to have a very cool reception as long as I am chairman of this committee if you come in here and ask for the public to share in the cleanup cost, beyond what has already been defined by the DOE at Three Mile Island. And I mean that simply as a matter of fact. The sooner we put in mothballs WPPS 4 and 5—and personally, I would mothball all the reactors in the Northwest, and go the route we should have gone long ago in conservation and in renewable sources, the sooner we get on the road to meeting our energy requirements in this country. I think the phony cost analysis that we have had perpetrated upon the public—the so-called cheapness of nuclear power—it is time to really face up to the real facts. And I hope that the agency that you represent will give leadership in providing an honest evaluation and assessment of these cost factors.

I agree, we have got to handle this problem some way. We cannot stand around and argue who is going to do this or that. We have got to solve the Pennsylvania situation. But I hope that it has an impact on the whole nuclear program and people realize the significance and cost associated with the accident at TMI. And I could tell you the story of the cost estimates of Trojan and Pebble Springs when they started and what they were when they finished. We talk about military cost overruns. It has nothing to do with the kind of cost overruns we have had in our poor estimates and the cost of these reactors. I just wanted to get this off my chest, because I know what action there is that has been floating around about trying to assess nuclear reactors around the country to help in other aspects of this problem, and that is not going to fly either.

Mr. PALLADINO. Mr. Chairman, lest there be some misunderstanding, I think these questions of cost regarding waste disposal, having enough money for cleanup, having enough insurance for property damage—I think these are true costs that ought to be considered and charged to the industry.

With regard to TMI-2, I ventured my personal opinion; not the Commission's opinion.

Chairman HATFIELD. I welcome that at any time. And I realize the cleanup cost requests will come under DOE. But still, I think your agency has a vested interest in this whole matter, and I just wanted to let you know beyond your great professional competence and professional background that these were viewpoints I hold as the chairman of this particular committee.

Any other comments that any other Commissioner has to make? I believe this is your first appearance, Commissioner Roberts, and I want to welcome you especially as a new appointee to this Commission and wish you well.

Mr. ROBERTS. Thank you.

Chairman HATFIELD. Mr. Chairman, I appreciate your testimony today and your continued commentary and observations, and you too, Commissioner Gilinsky.

Mr. GILINSKY. Thank you, Mr. Chairman.

QUESTIONS AND ANSWERS FOR THE RECORD

Chairman HATFIELD. We will have some questions that I will include in the record for your response.

We will take a brief recess before calling the Federal Energy Regulatory Commission.

[A brief recess was taken.]

[The questions and answers follow:]

SUBCOMMITTEE QUESTIONS SUBMITTED FOR THE RECORD

TMI CLEANUP

Question. I notice you are requesting $315,000 in nuclear reactor regulation for TMI-2 cleanup. I assume there are other funds in your request for TMI-related matters. Can you give us some idea how much has been spent by the NRC to date for this and related activities.

Answer. We estimate that NRC has expended to date a total of 95 staff-years and $3.9 million in technical assistance support for TMI-2 cleanup and related activities.

Question. The Department of Energy has stated that the Federal role is limited to necessary R. & D. and the costs of cleanup remain with the owner. Do you agree with this approach and, in your view, do any of the DOE activities, such as the recent proposal to remove the entire core, fall outside of the concept of generic R. & D.?

Answer. The Commission believes that the cleanup of TMI-2 must be accelerated. The potential for slow degradation of containment integrity and equipment capability plus the increasing concern for an unexpected release of radioactive material suggest that it is time for the Federal Government to take a more aggressive role.

We support DOE's activities at TMI, including their decision to accept the TMI-2 core for R. & D. and storage. There is much to be learned from the conditions of the core that has safety ramifications—for planned and operating reactors—appropriate for DOE study. Furthermore, only DOE—and its contractors—has the technical capability to carry out investigations of the TMI core.

Question. As I understand it, the recent public utility commission decision in Pennsylvania which allows cleanup costs to be included in the rate base, is contingent on the restart of the undamaged unit at TMI-1. Would you care to comment on the *obstacles to restart of TMI-1?*

Answer. At present there are a number of obstacles to the restart of TMI-1. The obstacles can be categorized as actions associated with the restart hearing, actions required to comply with a court order on psychological stress, and actions associated with steam generator tube corrosion.

With respect to the restart hearing, as you know, TMI-1 was ordered to remain shut down in July 1979 and a hearing was held to determine if completion of specific actions recommended by the NRC staff were necessary and sufficient to permit the safe operation of TMI-1. The licensing board which presided over the hearing, issued partial initial decisions in August and December 1981 which were generally favorable to restart, but recommended that certain additional actions be completed prior to authorizing restart. In addition, in November 1981, the hearing was reopened to take evidence on issues relating to cheating by TMI-1 operators on the April 1981 NRC operator licensing exam. The reopened hearing was held in November and December 1981 and a decision by the licensing board on the cheating issue is expected to be issued in May 1982. When the board issued its partial initial decision in December 1981, it recommended that TMI-1 be permitted to operate at power levels up to 5 percent prior to the resolution of the cheating issue, but following completion of specific actions deemed to be necessary to permit safe operation of TMI-1. Many of the recommended actions involve plant modifications which are not yet complete, but none of the hearing-related actions appears to be controlling the schedule for plant readiness for restart at the present time. After the board issues its decision on the cheating matter, the Commission will decide whether the board's decisions should become effective.

Another obstacle to TMI-1 restart relates to a January 7, 1982, ruling (amended on April 2, 1982) of the U.S. Court of Appeals for the D.C. Circuit in ***PANE*** versus *NRC*, No. 81-1131. The court ordered the Commission to refrain from making a final decision to restart TMI-1 until it had conducted an evaluation—possibly including a full environmental impact statement—of the effects of restart on the psychological health of individuals and on the well-being of neighboring communities. The court issued only its judgment, stating that opinions would follow. Those opinions have yet to be issued. While awaiting the opinions, the Commission is moving forward with its evaluation of psychological stress and related issues in the TMI vicinity. It is unclear at this time whether the court's ruling will have the effect of delaying the schedule for restart of the reactor. Whether it does create delay depends on several factors: The procedures ordered by the court in its opinion, when it is rendered; the possibility of relief through further judicial review; the level of psychological stress found by the NRC in its evaluation; and the rapidity with which other unrelated problems—for example, corrosion of steam generator tubing—can be resolved.

The final major obstacle to TMI-1 restart relates to corrosion of steam generator tubes. In November 1981, while TMI-1 was in a cold shutdown condition, approximately 130 steam generator tubes were determined to be leaking and at least 8,000 tubes were damaged. Since that time, GPU has undertaken extensive efforts to determine the cause and magnitude of the problem and to find an acceptable solution. The NRC has been closely following these efforts.

GPU has investigated various repair options including inserting sleeves in defective tubes, tube plugging, steam generator replacement, and other repair techniques. In early April, GPU proposed a repair method which will be reviewed by the NRC staff. The impact on restart of the repair techniques under consideration varies considerably, but it is expected that the steam generators could not be repaired and the plant ready for operation until at least October 1982. A much longer delay is possible. At present, the steam generator problem appears to be the pacing item for plant readiness for restart.

Question. In view of these obstacles, do you personally feel that the PUC's have moved fast enough or far enough to obtain funds from local ratepayers for cleanup costs?

Answer. The NRC's regulatory responsibilities differ markedly from those of the State PUC's. Whereas the NRC's primary responsibilities are with protection of the public health and safety, the State PUC's primary responsibilities relate to the provision of utility services and the protection of ratepayers and consumers of those utility services. While the NRC has expressed no objections to measures such as allowing recovery of some portion of TMI-2 cleanup costs in the rate base, we recognize that such measures, which are within the exclusive province of the State PUC's, involve considerations of local financial matters and of burdens on local ratepayers and consumers which the NRC has neither the authority nor the expertise to entertain. Because of this and because the State PUC's regulatory responsibilities and the bases on which they carry out those responsibilities differ so markedly from those of the NRC, we do not believe it would be appropriate to comment further on the PUC's actions or the manner in which they have carried out their regulatory responsibilities.

Commissioner Ahearne believes that all involved agencies—Federal and State—have moved too slowly. This definitely does include the Pennsylvania Public Utility Commission.

CLINCH RIVER BREEDER REACTOR

Question. You have been asked by DOE to speed up licensing for Clinch River. What level of support and funding is planned for fiscal year 1982 and what is contained in the budget request for fiscal year 1983?

Answer. In fiscal year 1982 the level of NRC support and funding planned for the Clinch River Breeder construction permit review is 29 staff-years and $7.8 million. In the President's budget, NRC has included 24 staff-years and $12.3 million for fiscal year 1983.

Question. Your budget justification forecasts a resumption of the review of the construction permit for Clinch River. Have you resumed this review which was terminated in 1977? When it is resumed, I understand there are open issues identified from the previous review and new TMI-related requirements which must be considered. Can you describe generally some of these issues and give us an estimate of the time required to complete the review and issue the permit?

Answer. The review of the Clinch River Breeder Reactor (CRBR) plant construction permit application, which was suspended in 1977, was resumed in September 1981. The resumed review is being concentrated on the issues which were not resolved at the time the review was suspended and changes that have occurred during the ensuing years. These changes include plant design changes, organizational and programmatic changes, and regulatory guidance and requirements, including the TMI-related matters, that have been promulgated since the review was suspended.

Among the more important issues which were not resolved at the time the review was suspended are the containment system design including consideration of core disruptive accidents and large sodium releases, the thermal-hydraulic design including the capability for natural circulation, and the mechanical/structural design including the effects of elevated temperatures. Among the more important TMI-related matters are the applicants' organization and staffing to oversee design and construction, the emergency response facilties and instrumentation for monitoring accident conditions.

The NRC staff expects to be able to complete its review of the CRBR plant application in March 1983. Following the completion of the Advisory Committee on Reactor Safeguards' review of the application and the public hearing on both environmental and safety matters, a decision on the issuance of a construction permit for the CRBR plant is scheduled for June 1984.

Question. Mr. Chairman, I know you voted for the exemption, but can you or one of the other Commissioners briefly give us the Commission's reasons for denying the exemption request.

Answer. The Commission denied the exemption for a variety of reasons. Enclosed for the record is a copy of the order, together with the separate views of all Commissioners.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Nunzio J. Palladino, Chairman
Victor Gilinsky
Peter A. Bradford
John F. Ahearne
Thomas M. Roberts

SERVED MAR 16 1982

In the Matter of

UNITED STATES DEPARTMENT OF ENERGY
PROJECT MANAGEMENT CORPORATION
TENNESSEE VALLEY AUTHORITY

(Clinch River Breeder Reactor Plant)

Docket No. 50-537
(exemption request
under 10 CFR 50.12)

ORDER

(CLI-82-4)

On November 30, 1981 DOE, for itself and on behalf of its co-applicants Project Management Corporation and the Tennessee Valley Authority (Applicants), requested an exemption from 10 CFR 50.10 pursuant to 10 CFR 50.12 to conduct site preparation activities for the Clinch River Breeder Reactor (CRBR) prior to the issuance of a construction permit or limited work authorization. The scope of those proposed activities is described in the Commission's Memorandum and Order of December 24, 1981 in which the Commission established the informal procedures for considering this request. 14 NRC ___, CLI-81-35 (1981). Grant of the exemption was opposed by the Natural Resources Defense Council, Inc. and the Sierra Club (Intervenors) who are intervenors in the now reopened proceeding for a construction permit for CRBR. After receiving comments on the exemption request from Applicants, Intervenors, and several other persons, the Commission conducted an oral presentation on February 16, 1982. Subsequently, in the early part of March, the Commission conducted two public meetings to discuss the exemption request. The Commission has decided to deny the request.

Chairman Palladino and Commissioner Roberts dissent and would have granted the exemption.

Individual Commissioners' views are attached.

It is so ORDERED.

For the Commission

SAMUEL J. CHILK
Secretary of the Commission

COMMISSIONER GILINSKY'S SEPARATE VIEWS ON DOE'S EXEMPTION REQUEST FOR THE CLINCH RIVER BREEDER REACTOR

I have voted against granting the Clinch River Breeder Reactor an exemption from NRC's licensing regulations to permit early site work because I am not persuaded that such an exemption would be in the public interest.

Background

The Clinch River reactor is subject by law to NRC licensing. Normally, a utility cannot begin site preparation and excavation until it has received a Construction Permit ("CP") after satisfactory resolution of all environmental and safety issues. The NRC's regulations, however, do provide that an applicant may be granted an exemption, known as an Limited Work Authorization 1 ("LWA 1"), from this requirement if the Licensing Board has made all the environmental findings required at the CP stage and has made a preliminary safety finding that the site is suitable.[1]

The Department of Energy ("DOE") is eager to obtain the benefit of this exemption so that it may break ground as soon as possible. But given the state of the licensing proceeding, it does not appear that the Clinch River project will be eligible for an LWA 1 until sometime in 1983. In these circumstances, DOE has asked the Commission for a further relaxation of licensing requirements, under section 50.12 of our regulations, to enable it to begin site preparation now, roughly a year before it can satisfy the requirements for an LWA 1.[2] DOE has, in effect, asked for an exemption on top of an exemption. If the section 50.12 exemption request presently before the Commission is granted, DOE apparently intends to apply as soon as it can for an LWA 2 which, if granted, would permit additional work to be performed in advance of receipt of a Construction Permit.[3]

I will pass over two preliminary legal questions: whether section 50.12 of our regulations, which sets out the standards for granting the exemption in question, is in fact applicable to a one-of-a-kind research reactor which will as an incidental matter produce power; and, whether section 50.12 is consistent with the provisions of the National Environmental Policy Act.[4] The answers are unclear, and will presumably be provided by the courts in due time. For the purposes of this decision I will assume that the Commission can grant an exemption if that is in the public interest. As I stated at the outset, I do not believe it is.

Effect of an Exemption on NRC and Power Reactor Safety

The source of my concern is that granting the section 50.12 exemption would be the first step in placing Clinch River on a fast track within the NRC license review process.[5] Such high-priority, fast-track treatment for Clinch River is bound to impact licensing and safety supervision of the power reactors which constitute our principal responsibility.

The Clinch River reactor involves a new technology for which there is no established body of NRC safety criteria. These need to be developed while the safety review is being performed. If this work is to be done properly, it will inevitably make substantial demands on the limited resources and skills of the NRC. In view of the budgetary situation this agency's resources are tight. If Clinch River is placed on a fast track, other projects will likely have to be put on a slow track.

For most of last year, licensing schedule projections seemed to suggest that NRC would not complete power plant license reviews for a number of power plants before their construction was finished and they were ready to operate. It now appears that these fears were exaggerated. We have managed to gain control of these licensing schedules and we are now working apace with plant construction. However, we do not have a wide margin for dealing with unplanned contingencies. Moreover, in order to accelerate our licensing reviews, we have been forced to delay the resolution of a number of safety issues. Any resources which are freed by slowdowns in reactor construction schedules should be devoted to resolving these issues, which affect the protection of this country's $100-200 billion investment in light water power reactors, rather than to accelerating the breeder's licensing.[6]

While the President and Congress have urged us to deal expeditiously with both the breeder and light water reactors, there has not been any suggestion, of which I am aware, that the interests of the latter should be sacrificed in favor of the former. Such a suggestion would in fact be extremely unfortunate. Our predecessor agency was often distracted from the pressing safety and waste problems of the light water power reactors by the demands of the breeder reactor. This has proven to be an expensive mistake.

It is also interesting that the Edison Electric Institute, in its testimony at our hearing in support of the exemption request, was not prepared to recommend that licensing the breeder should take precedence over the licensing of its member utilities' light water power plants.

The issue, let me reiterate, is not whether the NRC will undertake the Clinch River review, but whether NRC will conduct it at a pace which is unnecessarily harmful to NRC's other responsibilities.

Applicant's Claim that Exemption Will Reduce Costs

Set against these concerns are the applicant's claims that substantial benefits will result from speeding up this project.

There is presumably some advantage in having a year earlier the information which the project is supposed to generate. The gain is intangible, and no persuasive argument was presented that it would be substantial. Whatever the economic incentives once were for developing breeder reactors, they are much diminished. Breeders, which compensate for their expense by conserving uranium, were economically interesting when uranium was thought to be scarce and large numbers of conventional reactors were expected to use it up quickly. But uranium supplies are plentiful and increasing, while the projections for the number of reactors to be installed have been sharply deflated. The chief problem in the uranium market is not finding uranium but coping with falling prices.

The applicant has also argued that, quite apart from any research benefits, substantial economic savings will result from an earlier start of construction. In its initial presentation, DOE asserted that a one year gain in the construction schedule would result in savings of $120-240 million.[7] When asked to justify these assertions, DOE submitted an analysis[8] which, as was pointed out by one of the parties to the proceeding, failed to consider the time-value of money and, as a consequence, did not suitably discount future expenditures. When this was done properly, the gains which DOE claimed for rapid completion of the project effectively vanished.

DOE then tried to revive its conclusion with an argument which purported to demonstrate that there would be a difference in the cost attributable to past expenditures depending upon whether or not the site preparation exemption were granted.[9] Both the Deputy Secretary and the applicant's expert witness, Arthur Andersen & Co., attempted to defend this argument at the hearing before the Commission. Needless to say, this proposition is wrong. It also contradicts the analysis of an almost identical problem, the cost of delays in licensing commercial power plants, done by DOE for the House Appropriations Committee.[10] That analysis correctly recognized that sunk costs cannot affect the choice among future alternatives. In other words, while it is valid to assign an interest charge to past expenditures, that charge is the same for all future options and therefore drops out of any cost comparison among them. What matters for choosing among future alternatives are _future_ benefits and _future_ costs.

In response to criticisms made at the hearing, DOE and Arthur Andersen filed additional written statements with the Commission. DOE conceded that from "the economic or resource perspective" interest on past expenditures is not a factor to be considered in deciding between the costs of future options.[11] In spite of this, the Deputy Secretary persisted in presenting a "financial cost" analysis which is the same incorrect analysis DOE originally put forward. DOE thus lists $190 million in interest on past expenditures as the principal cost of not granting the exemption.[12]

The $190 million figure comes from Arthur Andersen's conclusion that "In the event of _a one-year delay_ in the construction of Clinch River, _interest_ will be incurred _for one extra year_."[13]

Arthur Andersen's error lies in comparing project costs measured in dollars of two different years, the accelerated project's costs being measured in dollars of one year and the unaccelerated project's costs measured in dollars of the following year. When a correction has been made to measure the costs in dollars of a common reference year, (which can be any year) the conclusion of every example presented by Arthur Andersen is reversed.[14]

The conceptual difficulty seems to stem from overlooking the fact that the accounting convention for the cost of a project produces a result in dollars of the year of completion. An economic comparison between projects, however, must be made in dollars of a common reference year.

The error is a common one. As a standard textbook on engineering economy puts it, although the principle that a decision made now necessarily deals with the future is simple enough,

> "...many people have difficulty in accepting the logical implications of the principle when they make decisions between alternatives. This seems particularly true when sunk costs are involved. Although some of the failures to recognize the irrelevance of sunk costs involve a misuse of accounting figures, these mental obstacles to clear reasoning are by no means restricted to people who have had contact with the principles and methods of accounting."[15]

When interest on past expenditures has been eliminated from the calculation of the cost of not granting this exemption, three items remain: a management charge of about $40 million, a $20 million charge for (discounted) deferred revenue, and a negative figure which reflects the discounting of future expenditures. The sum of these figures, in the example presented by DOE, yields \$28 million as the cost of not granting the exemption.

Lest anyone look to the \$28 million to tip the balance toward an exemption, it should be noted that the figure is an arbitrary one, based on the artificially low discount rate assumed by DOE.[16] If a more realistic discount rate were employed, the cost might well be zero or, more likely, might become a benefit.[17] In any case, the uncertainty in the analysis is larger than the result.

In sum, no compelling argument has been made, on the basis of the cost estimates provided by the applicants, for the proposition that granting this exemption would serve the public interest by siginificantly lowering the cost of the Clinch River project.

Putting Clinch River on a Fast Track

Should Congress, nevertheless, want this reactor to be built earlier than contemplated by the licensing schedule, it would be best for Congress to exempt Clinch River from NRC licensing altogether. If NRC could easily accommodate an accelerated review, I would come to a different conclusion. However, it cannot. I am concerned not only about the impact of a fast track breeder licensing review on NRC's other responsibilities, but also about the quality of NRC's work if there is heavy pressure to accelerate the review. Even if this project were exempt from licensing, the NRC could still conduct a safety review, on the same "best efforts" basis as it performs others reviews for DOE.

To exempt Clinch River entirely from licensing may seem at odds with one of the original goals of this program -- to demonstrate the licensability of a breeder reactor -- but that goal is no longer as important as it once was. Such a demonstration was important when the CRBR was thought to be the prototype for dozens of commercial breeder power plants which were to follow on its heels. It now seems unlikely that there will be any commercial breeder plants in the United States for decades. And, even if breeders are built in the distant future, it is doubtful that the standards applied to this plant will be a satisfactory model for the later plants.

NOTES

1. 10 CFR 50.10

2. 10 CFR 50.12 governs the grant of an exemption from the requirements of 10 CFR Part 50. The Commission may grant an exemption if it finds that the exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. Section 50.12(b) prescribes that, in deciding whether to permit construction prior to the issuance of a construction permit, the Commission will consider and balance: (1) whether the construction will have a significant adverse impact on the environment; (2) whether any adverse impact can reasonably be redressed; (3) whether the construction would foreclose the subsequent adoption of alternatives; and, (4) the effect of delay on the public interest, including the need for the power to be generated by the proposed facility, the availability of alternate sources of energy, and the cost of delay to the applicant and to consumers.

3. DOE presently seeks permission to clear and grade the site, build access roads and construction facilities, and excavate the reactor's foundations. These are the type of activities normally permitted under an LWA 1. The installation of structural foundations prior to the issuance of the construction permit normally requires the issuance of an LWA 2. This requires the Licensing Board to find that the requirements of an LWA 1 have been satisfied and that there are no unresolved safety issues that would constitute good cause for not allowing the activities proposed under the LWA 2 to proceed.

   DOE expects that beginning site preparation in 1982 will enable construction to be completed one year earlier than if site preparation were to begin in 1983.

4. 42 U.S.C. 4321 _et seq_.

5. There is a view that nothing of the sort is involved here, and that we have only to deal with an isolated exemption. This used to be called salami tactics. The modern name is segmentation of decisionmaking.

6. I am aware that the NRC staff recently informed the Commission that speeding up Clinch River licensing would not require much additional effort. This does not relieve my concern over resources; the staff estimate is implausible unless the Clinch River review and the development of its licensing criteria are to be superficial affairs. If anything, the staff estimate heightens my concern about how the staff would interpret a Commission decision to authorize a speedup in the Clinch River licensing schedule.

7. Letter from Secretary Edwards to NRC Chairman Palladino, November 30, 1981.

8. Letter from Deputy Assistant Secretary Chipman to NRC Chairman Palladino, December 31, 1981.

9. DOE Submission to the Chairman, "Re: Clinch River Breeder Reactor Plant", January 28, 1982.

10. In its report, DOE states that "the monthly carrying costs of the completed units ... would be incurred even if the units operated and are therefore not part of the direct costs of the delay." DOE went on to explain that "any cost that would be incurred with or without the delay does not affect this cost differential and is therefore not part of the cost of the delay." See letter of April 14, 1981, from Richard E. Weiner, Director, Division of Power Supply Reliability, Office of Utility Systems, Economic Regulatory Agency to Darrell G. Eisenhut, Director, Division of Licensing, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission.

    At the hearing, the Commission asked the Deputy Secretary to provide it with the Economic Regulatory Agency's views on DOE's method of calculating the gains to be realized by granting the section 50.12 exemption. DOE's written response states that DOE no longer provides cost analyses to the House Appropriations Committee and that in view of "recent reorganizations within the Department, the Office of Policy, Planning and Analysis is the organization with the relevant responsibility and expertise for this review." Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant", February 25, 1982.

11. Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant", February 25, 1982, p. 3.

12. ibid., p. 5.

13. Letter from Arthur Andersen & Co. to the Commission, February 23, 1982, p. 3.

14. Arthur Anderson submitted the attached chart which purports to demonstrate that completing the illustrative project one year earlier will result in a savings of $563 million in the overall project cost. As can readily be seen from the chart, however, the cost of the accelerated project is measured in 1994 dollars while that of the unaccelerated project is measured in 1995 dollars.

If the cost of the accelerated project is measured in 1995 dollars, using Arthur Andersen's assumption of an 11% rate of interest, the cost of the project is $8,903 million ($8,021 plus 11%). This cost is $317 million greater than the cost of the $8,584 million cost of the unaccelerated project (also measured in 1995 dollars).

15. Eugene L. Grant, W. Grant Ireson, Principles of Engineering Economy, New York, 1970, p. 315.

16. DOE has assumed an inflation rate of 8% and interest rate of 11%. These assumptions result in an effective discount rate of 3% and, in this case, a saving of approximately $30 million.

17. I would also note that DOE initially valued the deferred power output of Clinch River at $6 million per year but that it has revised this estimate to $10-20 million. There does not seem much point in quibbling, however, about this figure.

CHART SUBMITTED BY ARTHUR ANDERSEN (SEE FOOTNOTE 14)

ILLUSTRATION OF THE COST OF A ONE YEAR DELAY IN 1982

Year	No Delay (Millions) Yearly Investment	No Delay (Millions) Carrying Cost	No Delay (Millions) Total Cost	One Year Delay (Millions) Yearly Investment	One Year Delay (Millions) Carrying Cost	One Year Delay (Millions) Total Cost	Carrying Cost Increase (Decrease)
1974	$100	$ 11	$111	$100	$ 11	$ 111	$ -
1975	100	23	234	100	23	234	-
1976	100	37	371	100	37	371	-
1977	100	52	523	100	52	523	-
1978	100	68	691	100	68	691	-
1979	100	87	878	100	87	878	-
1980	100	108	1,086	100	108	1,086	-
1981	100	130	1,316	100	130	1,316	-
1982	100	156	1,572	-	145	1,461	(11)
1983	100	184	1,856	100	172	1,733	(12)
1984	100	215	2,171	100	202	2,035	(13)
1985	100	250	2,521	100	235	2,370	(15)
1986	100	288	2,909	100	272	2,742	(16)
1987	100	331	3,340	100	313	3,155	(18)
1988	100	379	3,819	100	358	3,613	(21)
1989	100	431	4,350	100	408	4,121	(23)
1990	100	490	4,940	100	464	4,685	(26)
1991	100	554	5,594	100	526	5,311	(28)
1992	100	626	6,320	100	595	6,006	(31)
1993	100	706	7,126	100	672	6,778	(34)
1994	100	795	8,021	100	756	7,634	(39)
1995	-	-	-	100	850	8,584	850
Total			$8,021			$8,584	$563

The $563 million cumulative cost that would be incurred as a result of a one-year delay represents the future value of the $145 million cost during the year of delay. It is based on the delay being a full year, the succeeding construction period being 13 years and an interest rate of 11%.

COMMISSIONER BRADFORD'S SEPARATE VIEWS ON CLINCH RIVER

I have only a little to add to the views of Commissioners Gilinsky and Ahearne. I agree in general with the points that they have made and concur specifically in Commissioner Gilinsky's discussion of delay costs[1] and in the latter part of Commissioner Ahearne's discussion of the DOE analysis.[2] In particular, I see nothing useful to be had from DOE's attempt to calculate costs three different ways.[3] The economic costs are what matters, and the Commission majority is in agreement that they do not exceed $28 million using the implausibly low DOE discount rate.

As Commissioner Gilinsky has noted, a more realistic discount rate would show a net benefit from not accelerating this project. Indeed, there is likely always to be a net benefit from deferring a project unless the discounted value of its operation is sufficient to tip the balance the other way. With Clinch River, the value of accelerating the operation is non-existent. The benefits from its operation occur only when a scarcity of uranium drives the cost of conventional reactor fuel above the cost of reprocessed plutonium. Since that event now does not seem at all likely in this century (a proposition not challenged by DOE or industry witnesses or Commissioners Palladino and Roberts), there is no economic benefit to be assigned to having the Clinch River Breeder in 1988 rather than 1989.

I agree in general with Commissioner Ahearne's analysis of the non-economic factors although I do not attach much significance to the history of Section 50.12. Specifically, I agree that the Commission could grant the exemption consistently with Section 50.12.[4] I agree also that nothing in the first three factors under 50.12 appears to preclude the exemption. However, the exemption is emphatically not in the public interest. The economic dimension of the public interest test has been covered. All that remains is a discussion of the implications for the NRC licensing process.

One must start with the realization that the "normal" licensing process defines the public interest as the NRC has come to view it over three decades. During this time it has licensed nearly half of the free world's nuclear generating capacity without any delay of completed plants and with minimal delay of any sort. Consequently, special exemptions are not lightly given, especially to one-of-a-kind reactors.

The difficulty with special exemptions that go beyond the Limited Work Authorization procedures is that they slice applications into inscrutable segments. Bit by bit, plants get built, with their full implications unreviewed until completion. As the economic commitment grows, the safety and environmental reviews are inevitably subject to increasing economic pressure.[5/] For all of the Commission's past protestations to the effect that the work is done at the risk of the applicant, this has rarely been completely true and is in any case unpersuasive when the applicant is government funded to so great an extent.

The issue here is not licensability. It is whether anything about this project merits the kind of special treatment that a shortcircuiting of our Limited Work Authorization procedures would involve. The Commission's most tangled and costly proceedings (Seabrook and Diablo Canyon) have come when it has allowed substantial investment prior to completion of difficult licensing reviews. In a recent case, the Court of Appeals[6/] declined to allow the NRC to postpone hearing a significant safety issue until after the plant was built.

These cases are not specifically analagous to this exemption request, but they serve to illustrate the broader point about the unwisdom of piling large sunk costs on the licensing process unnecessarily. While it appears that the environmental issues here are clearcut, the Commission should not go by appearances untested in hearings absent compelling circumstances. The NRC has been surprised before, and the allowing of increasing economic commitment to a project before the record merits a Limited Work Authorization is in itself contrary to the public interest.

1/ Gilinsky opinion, pp. 5-9.

2/ Ahearne opinion, pp. 32-39.

3/ Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant," February 25, 1982.

4/ Whether such an action would contravene NEPA is less clear. The segmentation question and the foreclosure of alternative points are substantial and would need more careful refutation than they receive in the opinions favoring the exemption. This point is especially important because it is hard to see how the Commission could be keeping an open mind on the NEPA issues while finding that the public interest requires accelerated completion of the project at Clinch River.

5/ As Justices Black and Douglas observed in their dissent in the only previous breeder licensing case, the ill-fated Fermi I plant, "...when millions have been invested, the momentum is on the side of the applicant, not on the side of the public. The momentum is not only generated by the desire to salvage an investment. No agency wants to be the architect of a white elephant." Power Reactor Development Co. v. Electrical Union 367 U.S. 396, 417 (1961).

6/ State of Illinois v. NRC, No. 80-1163, July 1,1981, unpublished opinion.

SEPARATE VIEWS OF COMMISSIONER AHEARNE

SUMMARY

The Department of Energy (DOE) has requested an exemption under 10 CFR 50.12 in order to begin site preparation for the Clinch River Breeder Reactor (CRBR). In addressing this request, I conclude it is not for the NRC to address (1) the need for an LMFBR program or for a demonstration scale facility or (2) the total cost of the CRBR.

Section 50.12 has a long history. A version of 50.12(a) authorizing specific exemptions has been in existence for over 20 years. When the Atomic Energy Commission (AEC) modified its regulations in 1972 to place restrictions on site preparation activities because of its new National Environmental Policy Act (NEPA) responsibilities, it introduced a version of 50.12(b) to provide a specific method by which applicants could show why work already begun should not be suspended until the AEC did an environmental review.

In 1974 the AEC developed an alternate way to approve site preparation activities prior to issuance of a construction permit -- the Limited Work Authorization (LWA). A 50.12 exemption was still an option, but the Commission noted it was to be used "sparingly and only in cases of undue hardship." Since the LWA provisions became final in 1974, only one 50.12 exemption for site preparation activities has been issued.

I conclude 50.12 can be applied in this case. However, DOE must make a strong showing on the four 50.12(b) factors since 50.12 is to be used only in very unusual circumstances. The factors to be considered are: environmental impact, redressability, foreclosure of alternatives, and public interest.

The NRC staff has concluded the work that would be done under the exemption would have no significant environmental impact, and the local authorities strongly support the request. Nevertheless, site preparation inherently involves some environmental impacts and $88 million would be spent on project construction. Reasonable restoration is possible, although there may be some potential problems because of funding considerations. No alternative appears to be foreclosed by the proposed work.

Addressing the effect of delay on the public interest, I considered whether there is (1) a Congressional mandate, (2) a need to move ahead on the project for production of power or research and development (R&D) purposes, or (3) a substantial dollar cost to the taxpayer for delay.

After reviewing many letters from Congress and the Congressional legislative history, I conclude there is no mandate to waive - or not to waive - our standard procedures. The project is not being justified by need for power, and Congress has confirmed such a need is not a factor. Since I defer to DOE on the general need for R&D and it has not made that case, R&D needs do not provide a justification for the exemption. Thus the decision rests on the cost. And it is here the applicant presented its worst case.

We have the following DOE estimates for a one-year delay:

November 30, 1981:		$120 million
January 18, 1982:	(a)	$120 million, "clearly conservative"
	(b)	$175 million
January 28, 1982:	(a)	$120 million, "clearly conservative"
	(b)	$161 million
	(c)	$166 million
	(d)	$175 million

February 25, 1982: (a) $129 million, "appropriations perspective"

(b) $28 million, "economic perspective"

(c) $218 million, "financial perspective

I conclude the DOE has finally agreed that as far as the true dollar cost of delay, it is in the region of $30 million - coincidentally, about the cost of the management team.

This is sufficiently different from the original estimate as to indicate the DOE paid little attention in preparing its original statement, although the series of estimates does not lead me to have confidence in any of the estimates. In the case of a utility applicant we would look with strong disfavor on such rapidly shifting submissions.

Thus, I conclude the DOE has failed to make the public interest case and, in the cost area, badly.

I am also concerned that DOE may not understand the appropriate controls that should be applied when assuming the role of a license applicant. The NRC has high standards for license applicants -- which underlie the concept of licensability, which is a CRBR objective. It is because of these standards that showing licensability is an important accomplishment.

Therefore I vote to deny the exemption request.

I. Areas Not Considered

In addressing the request for an exemption from the Department of Energy, 1/ there were two issues which I did not consider.

It is not for the NRC to decide the need for a liquid metal fast breeder reactor program or the need for a demonstration scale facility, e.g., whether such is a sound use of tax monies. Determination of these needs, including the timing and objectives, is more properly determined by DOE. 2/ In 1976 the Commission directed:

> "that the following be assumed as established by the ERDA impact statement and associated processes:
>
> a. The need for a liquid metal fast breeder reactor program, including its objectives, structure and timing;
>
> b. The need for a demonstration-scale facility to test the feasibility of liquid metal fast breeder reactors when operated as part of the power generation facilities of an electric utility system, including its timing and objectives." 3/

Thus these needs are to be assumed. Therefore, we should not address such questions as whether and by how much the drop in reactor orders, the reevaluation of uranium resources, and the drop in uranium prices have delayed the need for a demonstration reactor such as the CRBR. 4/ These are not appropriate issues for the NRC. We should defer to DOE.

We also are not estimating the full cost of the CRBR. Considerable debate has taken place over the "true" cost of this project, with much of the debate on how long will it really take to bring a first-of-a-kind machine to successful operation. Although costs of delay are an issue here, the full cost of the project is not.

II. Application of Section 50.12

There are three issues with respect to the use of Section 50.12: (1) can it be used; (2) should it be used; and (3) if so, does consideration of the factors support granting the present request?

The applicant argues that the section is a valid part of the NRC regulations; was consciously retained following introduction of the LWA procedures; that the Atomic Energy Act of 1954 requires that procedures such as this be available for demonstration projects; and, therefore, Section 50.12 is usable in this case. The opponents argue that 50.12 is a vestigial remnant -- with little applicability after the 1974 LWA procedures were issued, as shown by the fact that virtually all exemptions were issued before the LWA provision was a portion of the regulations; that it was not meant to be used for first-of-a-kind designs; and that a contention in the reopened hearing precludes the use of Section 50.12.

Background of Sections 50.12 and 50.10

In 1960 the Commission added a new paragraph to Section 50.10 which provided "No person shall begin construction of a production or utilization facility on a site on which the facility is to be operated until a construction permit has been issued." 5/ The new regulation went on to define construction to include pouring of foundations or installation of any portion of the permanent facility. It explicitly excluded activities such as excavation, and construction of roadways, railroad spurs, and non-nuclear facilities such as turbine buildings and temporary construction buildings. This was not an absolute prohibition. The Commission did grant requests for specific exemptions. 6/ In fact, in 1969 the Commission proposed specific procedures and criteria for issuing exemptions to allow certain categories of activity prior to issuance of a construction permit. 7/ However, this proposal was later withdrawn. The enactment of the National Environmental Policy Act (NEPA) in 1970 caused a significant change in the Commission's approach.

Changes to Reflect NEPA

In response to NEPA, the Commission proposed a rule in 1971 8/, which became final in 1972 9/, to "redefine the 'commencement of construction'" and "provide for Commission environmental review prior to 'commencement of construction.'"10/ Under the new definition of "construction" an applicant could no longer clear land, excavate, build a non-nuclear building, or take other substantial action which would adversely affect the environment. Some activities, such as those reasonably necessary for determining site suitability, were still permitted provided efforts were taken to minimize environmental harm.

In some cases the proposed rule would have affected activities already underway. Activities which were no longer authorized but which had been authorized, either at the applicant's option (because they were not covered by the original definition of construction) or by a previously issued specific exemption (under 50.12), were dealt with by the addition of two new sections -- 50.10(d) and 50.12(b). In essence, affected applicants were required to show cause why their activities should not be suspended until the Commission had an opportunity to do an environmental review. The Commission reached its decision on the show cause requests by considering and balancing a set of factors. The factors to be considered were virtually identical to the factors listed in the current version of 50.12(b).. The proposed rule addressed only transition cases.

The final rule added a footnote to the standard exemption provision, Section 50.12(a), which provided "In acting upon an application for an exemption permitting the conduct of the activities prior to the issuance of a construction permit prohibited by §50.10, the Commission will consider and balance the environmental factors [applicable to the show cause determination as] described in paragraph (b) of this section." The Commission explained:

> "In making this relief generally available only to those persons who have commenced actual site preparation activities prior to the effective date of these amendments, the Commission realizes that in individual cases, particularly those instances where plants are in an advanced stage of development, but where no site preparation work has yet been started, undue hardship may be incurred. In those situations, relief may be sought by requesting a specific exemption under §50.12. Although it is expected that specific exemptions will be used only sparingly for this purpose, appropriate relief may be granted in particular cases where the facts so warrant and a favorable determination can be made with respect to the specified environmental considerations listed in the new §50.12(b)." 11/

Limited Work Authorizations and Section 50.12

In 1974 the Commission introduced a new set of amendments which "would provide for a procedure different from that set forth in §50.12(a) of the Commission's present regulations in 10 CFR 50 whereby site preparation and excavation and certain other on-site activities could be undertaken prior to issuance of a construction permit for a nuclear power reactor."12/ The procedure, a limited work authorization (LWA), differed from an exemption in several important respects. Although the LWA was routinely available, the scope of activities was defined and limited, the staff had to complete its final environmental statement before issuance, and the Licensing Board had to make the required NEPA findings before issuance. 13/ The proposed rule included an amendment to 50.12 which precluded any exemption from 50.10 authorizing activities beyond the scope of an LWA. However this was "deleted as unnecessary in light of the Commission's policy of granting exemptions from §50.10(c) sparingly and only in cases of undue hardship." 14/

The Commission explicitly considered the value of the LWA procedures and the relation to exemptions:

> "A number of comments suggested that the Commission should adopt a more liberal policy regarding granting of exemptions from §50.10(c) pursuant to §50.12(a). The Commission has rejected this suggestion and will continue the present policy of granting such exemptions sparingly and only in cases of undue hardship. A number of comments also suggested that the provisions in §50.10(e) requiring a full NEPA review and hearing prior to grant of authorization were unnecessary and would unduly delay plant construction. The Commission believes however, that such provisions, which facilitate public participation and ensure appropriate consideration of NEPA matters, are in the public interest and should be retained in the rule."15/

The following comment made by the Commission in 1974 is of interest in the present case:

> "Consideration of the instant amendments arises at a time of deep national concern over energy sources and supply -- a concern which the Commission fully shares." 16/

The LWA procedures were an attempt to accommodate the Commission's NEPA responsibilities with a need to bring nuclear power plants on line:

> "Prior to the enactment of the National Environmental Policy Act of 1969 (NEPA) and the amendments to §50.10 adopted by the Commission on March 21, 1972 (37 FR 5745), site excavation for safety-related structures was generally permitted to be undertaken by applicants without any prior Commission review. The essential distinction between the past situation and the present one is that NEPA now applies to certain Commission actions. However, this essential difference is accommodated in the amendments by the requirement that there be a full NEPA review and hearing on NEPA issues covered by the Commission's NEPA regulations prior to authorizing any on-site work otherwise generally prohibited by §50.10(c). . . The Commission believes that this approach reflects a reasonable approach toward timely decision making within the framework of the present Act." 17/

In 1975 Section 50.12 was modified as part of a number of changes issued to reflect the abolition of the Atomic

Energy Commission and the creation of the Nuclear Regulatory Commission. 18/ The amendments were characterized as technical and conforming amendments rather than substantive amendments. The footnote to §50.12(a) was deleted, and §50.12(b) was revised to cover a request for an exemption from 50.10 rather than an attempt to show cause why the Commission should not suspend activities which were ongoing during the specified transitional period in 1972. Presumably the transitional determinations had been completed and the original 50.12(b) was no longer necessary. Consequently this change appears to accomplish little more than deleting an unnecessary section and transferring a related section from a footnote to a new paragraph.

One final change of interest occurred in 1976 and 1977. While considering early site review regulations, the Commission proposed to "extend the so-called 'limited work authorization' concept to include production facilities such as commercial isotopic enrichment plants and fuel reprocessing plants, and testing reactors." 19/ The Commission did extend the LWA procedures to specified utilization facilities rather than just power reactors. However, the final rule did not include production facilities. The Commission simply asserted it decided not to extend the LWA procedure to production facilities "because this would be premature and unnecessary." 20/

Can Section 50.12 be Used?

Based on the development of the rules, I reach the following conclusions: The approach currently found in §50.12(b) was originally developed to deal with a transition period which occurred in 1972 when the AEC adopted new restrictions on construction activities to implement its NEPA responsibility. Although it was primarily intended for applicants who had already begun affected activities, there was a recognition from the beginning that exemptions might be justified in a few limited other instances. This exemption option has been deliberately maintained, although the Commission has consistently insisted it should be used "sparingly" and only in cases of "undue hardship" or "extraordinary" circumstances. 21/ This high threshhold for exemptions was maintained in the face of serious energy concerns in 1974.

However the AEC may have intended the provision, it is nevertheless present in the regulations. Although plausible, there is nothing in the background of Section 50.12 to suggest the Commission intended to preclude an exemption for a first-of-a-kind facility. The failure to expand the scope for LWA's is consistent with simply not extending a routine procedure to a category of facilities for which there is little experience and little necessity. It does not follow the Commission intended to preclude use of a nonroutine procedure for a nonroutine facility. Finally, to forbid its use because of a contention in the hearing essentially repeals the provision, since such an interpretation would transform a 50.12 exemption into an LWA-1, which can be issued after a hearing.

Basically the Commission appears to have preserved its options to act on a case-by-case basis in the event that unusual circumstances justified unusual actions. Consequently, I do not reject on its face the applicants' request. However, they have a heavy burden.

Thus, I conclude the section can be applied.

Should Section 50.12 be Used?

Whether it should be applied turns on whether the exemption route should be used for CRBR. The issue is linked to 50.12(b)(4), i.e., it is a public interest question. In essence, if everyone agrees CRBR should be licensed, then what type of licensing procedure should be followed? The exemption opponents argue that for a first-of-kind reactor, the full, standard (canonical) proceeding should be followed. The applicant argues that what is necessary is for the licensing procedures in the regulations to be followed. Then, since 50.12 is in those regulations, the applicant believes granting the exemption is consistent with following NRC licensing procedures.

I find the applicant's arguments slightly specious. The provision is in the NRC regulations - and was used extensively until the LWA provision was included in the NRC regulations. The 50.12 exemption route was used for 49 facilities in the last fifteen years. However, after the LWA rule was published in April, 1974, LWA-1's were issued for 55 plants. The only 50.12 request granted since April 1974 was in a case where (a) an LWA-1 had already been granted (and therefore the initial environmental hearing had been held), (b) the applicant wanted approval for construction activities going beyond those approved in the first LWA, (c) the NRC had in place a policy statement prohibiting issuing additional LWA's until a particular rulemaking was completed, and (d) the request (referred to variously as a request for a broader LWA and for an exemption) was unopposed by the parties to the hearing. Thus, while the applicant is correct -- a 50.12 exemption is part of the NRC licensing procedures -- granting such an exemption would place the CRBR proceeding in the rare category, the category of extremely unusual procedures. To the extent that meeting full NRC licensing procedures is among the objectives of the CRBR program, use of a 50.12 waiver prevents meeting these objectives.

A major issue relating to the public interest is what is meant by licensability. As I recall, one objective of the CRBR project from its beginning has been to demonstrate licensability. The requested exemption is perceived by many as removing CRBR from the NRC's normal process and thereby damaging the possibility that the project can meet the licensability objective. Thus, for example, Senator Quayle wrote:

> "The legislative history of the Clinch River project clearly shows that a major goal of this project is to demonstrate the licensability of the liquid metal fast breeder reactor. Any deviation from licensing procedures established by NRC would obviate this purpose and deprive the nuclear industry of the clear precedents needed to proceed with additional LMFBR plants.

> I believe the best way to assure a stable future for the nation's nuclear industry, which represents a vital part of our present and future energy supply structure, is to stabilize and clarify the regulatory environment. Exempting demonstration plants from normal regulatory requirements can only delay progress toward meeting this goal. It will also retard the progress of proving new technology. For these reasons, therefore, I request that you deny DOE's request for exemptions." 22/

These arguments do not lead me to reject the request, however, since it is not an NRC requirement that we follow our normal licensing procedures. However, DOE must make a strong showing on the 50.12(b) factors.

III. Consideration of Section 50.12(b) Factors

Section 50.12(b) instructs the Commission to consider and balance four factors: (1) environmental impact, (2) redressability, (3) foreclosure of alternatives, and (4) public interest.

Environmental Impact

The first factor concerns "significant adverse impact on the environment." Inherently this is not a trivial issue for site preparation activities. The Commission originally redefined construction to include site preparation activities because "site preparation constitutes a key point, from the standpoint of environmental impact, in connection with the licensing of nuclear facilities and materials." 23/

In 1977 the NRC staff prepared a final environmental statement (FES) for the CRBR. 24/ The staff concluded that site preparation activities, conditioned as proposed in the FES, would not result in significant adverse environmental impacts. Although there have been changes since that evaluation, the NRC staff continues to believe no significant adverse impacts will result.

In addition, the local authorities are strongly in favor of the project. We have received letters of support from the Mayor and the Administrator of Clinton, Tennessee, from the Mayor and City Coordinator of Harriman, Tennessee, from Tennessee State Representative McNally, who represents Oak Ridge, from Governor Alexander of Tennessee, and from Mayor A. K. Bissell of Oak Ridge, who spoke at the Commission's public meeting on February 16, 1982. Such support, while a strong positive indication, is probably not sufficient to show negligible environmental impact (I believe the authorities of West Valley, New York also supported that project when it was proposed). But if the Commission weighs heavily the opposition of local authorities to siting a facility, we should similarly weigh such support. The local authorities also agree with DOE's contention that some of the proposed work would also be valuable for future industrial development of the site. Nevertheless, $88 million would be spent on project construction and, even at today's high prices, that represents a significant construction project -- it clearly will have an impact on the area.

Although the impacts are not so trivial that they can be entirely ignored, they do not weigh strongly against the exemption.

Redressability

The second criterion, whether redress of adverse impacts "can reasonably be effected" is not completely separate from the first. The applicant argues that all but the detailed topography can be restored for about 10% of the construction cost, and that some of the activities (e.g., the railroad spur and roads) could be left to enhance industrial development.

I do not read the criterion as asking whether the site would be restored but, rather, whether it could be restored. The former addresses Congressional funding; the latter, the facts of construction and restoration. Although I am skeptical that what takes $88 million to do can - at a later date - be undone for $8 million, I agree with the applicant that it should be possible to undo what they propose to do. The applicants will not be able to restore all of the original topographic features. However, I believe some consideration should be given to the industrial zoning which indicates local feeling about appropriate uses.

This factor does not weigh against granting the exemption. Reasonable restoration is possible, although there may be some practical problems because of funding considerations.

Foreclosure of Alternatives

The third factor concerns whether the activities would "foreclose subsequent adoption of alternatives." The intervenors argue it would foreclose their contention that an LWA cannot be granted for a first-of-a-kind reactor. This is a bootstrap argument. To forbid the use of exemption authority because of a contention in an LWA hearing effectively nullifies the exemption authority. If the exemption must await the LWA-1 hearing, the authority becomes meaningless because an LWA-1 itself can be issued after the hearing. As for the merits of the issue, I see no reason why it needs to be discussed in a hearing. It is basically a legal argument. I do not believe the intervenors' foreclosure argument is pursuasive. No other arguments were raised as to issues that would be foreclosed.

The staff concluded in its 1977 final environmental statement that the ERDA sites at Hanford, Idaho and Savannah River "are better than the proposed site or any of the other alternative sites because the isolation provided would result in lower radiation doses in the event of an accidental release of radioactivity, in terms of both the nearest receptor and the number of people exposed." 25/ However:

> "A delay of 2-1/4 years in completion of the project appears to be the minimum result of a change in site location at this time, assuming current schedules would otherwise be met . . . The staff's overall conclusions hinge on a balancing of the reduction in accident risks achievable with a remote location against the resulting costs and inability of the demonstration plant to accomplish its goals on a time frame compatible with the present timing goals of the LMFBR program . . . In balancing the factors discussed above, the staff's judgment is that the applicant's preferred proposal, utilizing the Clinch River site, is reasonable and that no substantially better alternative is available." 26/

The $88 million for project construction represents a significant investment. More important than the money, the work will give this site an additional edge in terms of timely completion. Thus there is potential prejudice to the alternate sites issue.

However, the Clinch River site already has an edge as evidenced by the staff's decision in 1977, and there is no reason to believe the incremental advantage obtained through work under the proposed exemption is sufficient to foreclose consideration of alternative sites. This conclusion is influenced by the redressability considerations discussed above. In addition, anyone following this project at all closely realizes that there is no real possibility of an alternative site for the CRBR.

On balance, I believe factor (3) of Section 50.12(b) is neutral regarding this exemption request.

Finally, the public interest factor must be addressed -- as has been obvious from the beginning. Since the Applicants have a heavy burden and the other three factors are marginal, it is clear that consideration of the public interest criterion will be determinative for me.

IV. Public Interest

In considering the effect of delay on the public interest, there are three issues: (1) Is there a Congressional mandate for the exemption? (2) Is there a need to quickly move ahead on the project for either the power or the R&D? (3) Is there a substantial dollar cost to the taxpayer for delay?

If some or all are strongly "yes," then it would seem 50.12(b)(4) would carry the waiver request.

Congressional Mandate

On December 24th the Commission asked the DOE: "Is there any indication in the acts providing for CRBRP authorizations or appropriations, associated committee or conference reports, or legislative history that speaks to the licensing procedures to be used by the NRC?." 27/ In response, the applicant quoted the Omnibus Appropriations Bill:

> "The Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97-35, includes a Congressional mandate for expeditious project completion. The Conference Report accompanying this legislation and the contemporaneous statements of the floor managers at the time of the enactment conclusively demonstrate the following elements of Congressional intent:

> a. The plant must be constructed in a timely and expeditious manner; construction must be undertaken as expeditiously as possible; the cooperation of all agencies is required." 28/

However, in testimony before us, the lead spokesman for the applicant, Mr. Edgar, was less positive:

> "Commissioner Ahearne: My question is, do you read the omnibus budget bill as at least implying Congressional intent that the NRC should grant the exemption?
>
> Mr. Edgar: It implies Congressional intent, or in fact reflects the Congressional intent that Clinch River should be completed as expeditiously as possible. It does not address 50.12 per se. It provides a basis upon which the Commission can take that into account as a matter of policy in whether to exercise its discretion to use 50.12.
>
> Commissioner Ahearne: My question is, do you read it as implying that it's the Congressional intent that we should grant the exemption?
>
> Mr. Edgar: It reinforces it." 29/

Several Senators and Congressmen have warned us not to interpret the language as endorsing the waiver and others have advised us it is consistent with the waiver request.

Those endorsing the request all point out the exemption would be consistent with the Congressional intent.

The Chairman of the House Committee on Science and Technology, Representative Fuqua, joined by fourteen other members, including the Chairman of the Subcommittee on Energy Research and Production, Representative Bouquard:

> "We would, therefore, confirm that the Secretary's request is consistent with Congressional intent." 30/

The Chairman of the Senate Subcommittee on Nuclear Regulation, Senator Simpson, joined by Senator Domenici, Chairman of the Senate Budget Committee:

> "We believe that NRC approval of the Secretary of Energy's request pursuant to Section 50.12, provided the Commission finds that all other requirements of that section are met and that such action is consistent with its statutory responsibilities for protection of the public health and safety, would be fully consistent with the expressions of Congressional intent respecting this project. . . ." 31/

The Chairman of the Senate Committee on Energy and Natural Resources, Senator McClure:

> "I therefore confirm that the Secretary's request is consistent with Congressional intent." 32/

And, finally, 33/ the Senate Majority Leader, Senator Baker said:

> "If the Commission finds in its deliberations and considerations that the four criteria of 10 CFR 50.12 are satisfied, then I believe it is consistent with the established and continuing purpose of section 50.12, and in the public interest as expressed repeatedly by the Congress, for the Commission to act favorably on the submission by the Secretary of Energy. The intent of the Congress has most recently again been expressed in the Conference Report on the Omnibus Budget Reconciliation Act of 1982, (P.L. 97-35), wherein the Clinch River Breeder Reactor Project is identified as an essential element of the Liquid Metal Fast Breeder Reactor program. The Conferees directed that the Project should be constructed in a timely and expeditious manner. The accompanying floor statements by the managers of the Reconciliation Act in both Houses of the Congress interpret and amplify that report language.
>
> In my judgment, if the Commission finds that the requirements of section 50.12 are met, favorable action on the DOE request would be entirely in harmony with the Commission's statutory role to protect the public health and safety, while continuing to reserve for the Congress the policy determination related to the funding, timetable, and role of the Project in the LMFBR program." 34/

However, the quoted letters do not indicate a belief that Congress considered the 50.12 waiver provision and intended for us to use it. This point has been made by several other Congressmen:

The Chairman of the Senate Appropriations Committee, Senator Hatfield, joined by Senator Cohen:

> ". . . If the NRC were to authorize site preparation activities at this time, it would be compelled to grant exemptions from established regulatory procedures for the CRBR. We have serious doubts about the wisdom of granting such exemptions.
>
> The Clinch River Breeder Reactor was authorized in 1970 by P.L. 91-273 as a demonstration project that would lead to the early commercialization of breeder reactors. Since its inception, NRC licensing of the CRBR has been an integral part of the project.
>
> * * *
>
> Throughout the annual debates over the CRBR, Congress has never expressed support for regulatory exemptions for the project. To the contrary, the Omnibus Budget Reconciliation Act conference agreement reaffirms the need for proceeding with the established regulatory course for the CRBR in order to make future commercialization possible. The Conference report states, 'The conferees intend that the plant should be constructed in a timely and expeditious manner, so that a decision on the commercialization and

> deployment of breeder reactors can be made on the basis of information obtained in the operation of the plant.'"
>
> We do not agree with Secretary Edward's assertions that the CRBR ' . . . must be expeditiously constructed to meet the objectives of the CRBR program.' To the contrary, we believe it is in the best interests of future commercial development of LMFBRs for the CRBR to undergo the established regulatory procedures without exemption. Furthermore, we believe granting exemptions to the CRBR could seriously erode the public's confidence in the federal nuclear energy programs in general and breeder reactors programs in particular." 35/

The Chairman of the House Committee on Interior and Insular Affairs and Chairman of the Subcommittee on Energy and the Environment, Representative Udall:

> ". . . As chairman of the Committee with primary jurisdiction in the House over the nuclear regulatory process, I am concerned about the implications of the Commission's actions (pursuant to the Secretary's request) on the siting and licensing of the CRBR.
>
> Existing regulations (10 CFR Part 50.10) provide for a procedure whereby site preparation and excavation and certain other onsite activities could be undertaken prior to the issuance of a construction permit for the CRBR. The purpose of this regulatory procedure is to lessen the impact of the licensing process on an applicant's construction schedule and expedite completion of the project. The Secretary has determined, however, that this orderly procedure is inadequate in the case of the CRBR. He has requested, therefore, that the Commission provide the extraordinary regulatory relief of granting an exemption (under 10 CFR Part 50.12) that would allow CRBR site preparation prior to and without fulfilling the requirements for issuance of a limited work authorization (LWA). To my knowledge, the Commission has not granted an exemption under 10 CFR 50.12 in a contested proceeding since the adoption of the LWA regulations in April 1974; a practice in keeping with the Commission policy of granting such exemptions sparingly and only in cases of undue hardship.
>
> Prior to a final decision on the Secretary's request, I hope the Commission will consider fully the adequacy of established LWA procedures to allow a timely commencement of CRBR site preparation while protecting the integrity of the licensing process and the rights of all parties to participate in the proceeding.
>
> * * *
>
> Finally, to the extent that Clinch River is intended as a demonstration of the commercialization potential of breeder reactors (including their ability to be licensed by NRC), it appears somewhat self-defeating to shortcut the normal licensing process at the first opportunity. In the event that the Commission grants the exemption sought by the Secretary, public confidence in the regulatory process as it applies to Clinch River and future breeders may suffer unnecessary and irreparable harm." 36/

The ranking minority member of the Senate Subcommittee on Nuclear Regulation, Senator Hart, joined by Senators Tsongas, Humphrey, Bumpers, and Bradley:

> "We do not believe that it has ever been the intent of Congress to encourage such exemptions, nor do we believe that such exemptions are in the best interests of possible future commercial development of Liquid Metal Fast Breeder Reactors (LMFBRs).
>
> The legislative and contractual history of the Clinch River project clearly state that one of the goals of this project is to demonstrate licensability of LMFBRs for commercial application. To exempt this project now would merely postpone this determination and cause extensive delay and increased cost of any LMFBR plant that might follow. The time to clearly demonstrate LMFBR licensability is now.
>
> * * *
>
> This report language [Conference Report accompanying the Omnibus Budget Reconciliation Act of 1981] is not a request for regulatory exemptions. To the contrary, it reaffirms the need to go through all steps of established regulatory procedure now to pave the way for possible future commercialization.
>
> We urge you to consider these points and deny DOE's request for exemptions." 37/

Examination of the legislative history does not show any indication that a 50.12 waiver request was addressed - even by suggestion - in discussions on the bill. Hence, although it is clear Congress supported moving ahead expeditiously on the CRBR, there is nothing to show this was not intended to direct DOE to get the licensing process restarted - rather than to direct the NRC to waive our normal procedures. Consequently, I do not read the Congressional action as a directive to waive - or not waive - our normal procedures.

Need for Power or for R&D

Turning to the second point, "although the Clinch River facility will produce electricity for the TVA power system, the proposal is not being justified on the basis of the electricity it will generate." 38/ In addition, the Conference Report for the Appropriations Bill stated:

> "The conferees intend that the plant should be constructed in a timely and expeditious manner, so that a decision on the commercialization and deployment of breeder reactors can be made on the basis of information obtained in the operation of the plant. The plant should therefore be constructed on the basis of that objective, and not

> on the basis of providing needed power in the specific region of the Clinch River site." 39/

Of course, this should also remove need for production of power as a factor supporting the exemption. (Fortunately, since with TVA deferring power rapidly and with an extremely aggressive conservation program 40/ it would have been difficult to rest on the need for 350 MWe for the TVA system.) As for the R&D need, in its 1976 decision the NRC decided to defer to DOE on questions of the general need, including timing. DOE has made little effort to support this exemption on the basis of the adverse impacts of delaying R&D results. (Although I defer to DOE's judgment, I note DOE has merely provided a few conclusory statements with little supporting material.) Thus the need for R&D does not provide a justification for the exemption request.

V. Dollar Costs of Delay

Which rests the decision upon the cost. And it is here that the applicant has presented his worst case. The cost of delay has been the subject of substantial discussion, both in filings by the applicants and the NRDC and in the public meetings held by the NRC. The applicant has presented several substantially different cost estimates - for the most part unrelated - and has used creative accounting.

It has been difficult to get a firm estimate from the DOE. The DOE has shifted position substantially. On November 30th, when DOE initially submitted their application, Secretary Edwards wrote:

> "Absent approval of this request, procedural delays will cause undue hardship in the form of another 1-2 years of delay and $120-240 million of increased costs. . . . Approval of this request would avoid hardship to the project and Federal taxpayer, since it would avoid another 1-2 years of delay and $120-240 million of increased costs." 41/

Secretary Edwards went on to reiterate this last point:

> "Approval of the request would . . . save the taxpayers $120-240 million." 42/

And later,

> "Additional . . . cost increases of $120-240 million can be avoided if the Commission recognizes the unique and extra ordinary circumstances surrounding the project." 43/

Secretary Edwards enclosed a November 1981 Site Preparation Activities Report, 44/ which he said "provides the detailed justification and support for this 50.12 request." The only addressal of the delay cost came in Section 7.0., "Effect of Delay on the Public Interest," where the total discussion of the cost consists of the following:

> "If approval to initiate site preparation activities identified herein is granted by March 1, 1982, it is estimated that the current Project schedule can be shortened by at least 12 months. Taking into account only the costs of those activities that are sensitive to schedule changes, the estimated 12 months reduction in schedule is conservatively estimated to result in a direct savings of $120 million." 45/

Certainly this magnitude of cost would be a significant factor and would weigh heavily on the side of granting an exemption in the public interest. Therefore, the Commission requested DOE in our order of December 24th to:

> "(a) Provide the documentation which forms the basis for projected cost of delay and environmental impact estimates referred to in the Site Preparation Activities Report and Secretary Edwards' letter.
>
> (b) Demonstrate the validity of the cost estimate." 46/

The DOE responded on January 18th:

> "Applicants estimate that, absent authorization pursuant to Section 50.12 to begin site preparation activities the Project will incur (1) additional delays at one-to-two years duration and (2) corresponding increased costs in the amount of $120-240 million." 47/

The DOE went on to state:

> "The range of delay costs can be conservatively estimated on the basis of: (1) an estimate of cost increases for certain unavoidable management activities which are particularly sensitive to delay; (2) an estimate of the effects of inflation assuming a delay in initial criticality from September 1988 to February 1990; and (3) an estimate of the cost of capital expended on hardware for the period of delay. Each of these estimates are more fully described below; they show that the cost estimate of $120-240 million in the SPAR is clearly conservative." 48/

* * *

> "The Applicants' estimate that the cost of maintaining the various management groups for an additional one-to-two year period is $42.3 million per year." 49/

Turning to inflation, the DOE noted:

> ". . . the CRBRP Project is funded through Congressional appropriations and thus operates with, and all costs are estimated based upon, year of expenditure dollars. Total project costs are estimated using a standard 8% escalation value. Any increased costs due to delay in this case will be borne by the nation's taxpayers, and the Commission should not ignore the adverse effects of inflation upon the taxpayer.
>
> The Applicants estimate that the impact of a one-to-two year delay amounts to $88.8 million per year. . . ." 50/

Finally, the DOE argued:

> "Whenever an organization, including the United States Government dedicates funds to a capital project, it foregoes the opportunity to invest those funds in alternative projects which will earn an equal or greater return on investment or to pay off debt on which the capital costs are being incurred. In short, the organization 'ties-up' capital and incurs an opportunity cost. Although certain components of the cost may be difficult to measure, it is, in an economic sense, a real cost and is included as a cost in an investor owned utility's accounting and ratemaking.
>
> * * *
>
> A one-to-two year delay in the Project schedule will result in additional cost on expended capital during the delay period. In order to arrive at a conservative estimate of the cost of capital during the delay period, a rate of 10 percent */ was applied only to the capital costs for hardware. **/ The delay costs amount to $43.9 million on a yearly basis. . . .
>
> */ The interest rate applied is substantially less than that established by the Secretary of Treasury pursuant to Public Law 92-41. See CAS 417.50. As of January 1, 1982, the rate established by the Secretary of Treasury was 14 3/4 percent. 47 Fed. Reg 366 (Jan. 5, 1982)
>
> **/ Applied to total capital costs the yearly cost of capital attributable to delay amounts to approximately $110 million per year." 51/

Therefore the DOE concluded a one-to-two year delay would result in cost increases per year of $42.3 million for unavoidable management activities, $88.8 million for inflationary impact, and $43.9 million for "increased interest on expended capital for hardware alone." 52/ Thus, although the DOE never totalled the numbers, the reader could reasonably infer a one year delay would cost $175 million.

However, government agencies, departments, etc., are financed by fund accounts. 53/ That is, they are given money for specific purposes -- those identified in their annual budgets. If the money is not used for this purpose, it must be "returned" to the Treasury. Some monies must be spent in the given fiscal year, although much R&D funding is "no-year" money and is available until expended. Nevertheless, fund money cannot be saved and invested for profit. Expenditures from fund money then have no real opportunity cost while monies spent from the asset or expense accounts of the private sector do.

The money raised in taxes by the Treasury is distributed to the various agency funds via the budgeting process. However, the government does not tax to accumulate capital. Thus Treasury monies have no real opportunity because they are also funds. It follows then that no cost accrues to the use of government funds, e.g., to government monies spent on government activities or projects directly operated by the government other than the one-for-one depletion of the fund. This is true if and only if fund money is used. 54/

On January 18th, NRDC and the Sierra Club filed comments on the November DOE application. They pointed out that "delay costs appear to be based almost solely on anticipated inflation. . . . When the time value of money is taken into account, inflation-related costs of delay vanish, because of offsetting savings from postponing expenditures." 55/ They argued that "Because the interest rate at which the Treasury borrows is currently greater than the inflation rate, there would be an actual savings by deferring expenditures on the project." 56/ The intervenors cost expert, Charles Komanoff, estimated "that a 1-year deferral in construction actually creates a savings, in present value terms, on the order of $30 million." 57/ 58/

Mr. Komanoff also calculated the effect of loss of revenue from the CRBR to be $20 million for a one year delay. (He obtained that by neglecting CRBR fuel processing and fabrication costs and assuming CRBR maintenance costs would be the same as the 1980 U. S. nuclear plant average and the CRBR capacity factor would be the same as the U. S. nuclear average to date.)

On January 28th, the DOE provided comments on the NRDC comments.

DOE agreed that time value of money should be taken into account, but said:

> "Unfortunately, NRDC fails to understand that in calculating the cost or saving from delay, not only unexpended funds but also expended funds must be taken into account. In fact, the Project incurs a substantial cost on expended funds as a result of any delay in beginning site preparation activities. . ." 59/

DOE stated that they "continue to rely on their earlier cost submission made in Response to Question 9 of the Commission's Order of December 24, 1981." 60/

They did present a table giving a present worth analysis of anticipated project expenditures and concluded "The net effect after discounting anticipated expenditures to present worth, is a $30.2 million savings." 61/ They went on to consider "the elements of the 'time value of money' neglected by NRDC." 62/ Chart B (following p. 31) shows "Cost of Annual Interest of Expended Capital at 11%" to be $189.9 million. This is arrived at by taking each year expenditures, from 1979 to 1981, inflating at 11% per year to the present, and then taking 11% of the total. The DOE also calculated the present worth of lost revenue from a one year delay in operating the CRBR to be $5.9 million. 63/

The DOE concluded:

> "A complete analysis which accounts for the 'time value of money' results in the following project costs and savings due to delay:
>
> | | |
> |---|---|
> | Net Savings on Anticipated Expenditures | $30.2 |
> | Interest on Past Expenditures | $189.9 |
> | Loss Due to Deferral of Revenue | $5.9 |
>
> In summary, in the event of a one year delay, the project will incur substantial increased costs. The elements of the delay costs on a yearly basis include: (1) increased management costs in the amount of $42.3 million; 30/ (2) inflation in the amount of at least $83.8 million; 31/ (3) using NRDC's analysis methods, interest on expended capital on a net basis of $23.5

> million; 32/ and (4) losses due to the deferral of revenue in the amount of $5.9 million. As these analyses demonstrate, the range of costs estimated in the SPAR OF $120-240 million is clearly conservative.
>
> 30/ See Applicants' Answers at 77.
>
> 31/ See Applicants' Answer at 46, 78.
>
> 32/ The net interest on capital of $23.5 million was derived by deducting the gross cost savings attributable to a one year delay from the interest costs on expended capital. Applicants' previous submittal estimated this value at $43.9 million. Applicants Answers Question 1 Answers 9(a)-(b), Appendix C. The additional refinements suggested by NRDC's methods of analysis provided a basis for the more rigorous analysis herein." 64/

The reader was thus left to conclude the true cost is $161 million (using the summary), $166 million (using "time value of money"), or $175 million (from the January 18th response).

NRDC-Sierra Club responded on January 28th, again using Komanoff:

> "'[T]he future rate and level of expenditures on CRBRP have no bearing on the cost of past expenditures.' Applicants' capital investments in the project are essentially sunk costs. They will have to pay interest on these investments at the same rate regardless of the project's start-up date. Put another way, 'There is no linkage whatsoever between progress of CRBRP and the Government's obligation to pay fixed costs of financing past expenditures.'" 65/

The DOE position was aggressively questioned by the Commission in the February 12th public meeting. The Commission requested that the costs be examined by the group that had been calculating cost of utility delay (for use in monthly NRC submissions to the House Appropriations Subcommittee on Energy and Water Development).

The DOE responded, in a February 25th letter from Deputy Secretary Davis, 66/ stating:

> (1) The DOE no longer provides cost analyses to Mr. Bevill.
>
> (2) In view of recent department reorganizations, the Office of Policy, Planning and Analysis has the relevant responsibility and expertise and therefore has developed the response.
>
> (3) There are "three distinct perspectives on the cost of delay" 67/
>
> (A) The Appropriations or Fiscal Perspective. Mr. Davis stated:

> "Each year, as Congress debates the funding to be appropriated to the project, the legislator's viewpoint for the decision will be in terms of inflated dollars. The cost of the project to date is always expressed in inflated dollars, not constant dollars. . . .
>
> From the appropriations perspective, a one year delay will cause the project costs to increase because of inflation on labor and materials, as well as the added costs of management during the delay. Offsetting these costs will be revenues that are higher due to inflation during the delay. These have been estimated to be: $136 million in cost inflation; $42 million in management costs; and higher revenues (a net credit) of $49 million. This results in a net total of $129 million in increased appropriations over the life of the project." 68/

> (B) The economic or resource perspective. Mr. Davis identified these by distinguishing them from the third perspective:
>
> "Economic costs measure the total burden upon the productive capacity of the national economy. Financial costs measure the relative burden upon individual parties and provide a useful perspective when considering individuals, firms or governments as operating entities. Thus, while in a given case, past expenditures may have no economic cost, the individual, firm or government making those expenditures may sustain a real financial cost because capital is tied up unproductively." 69/

He calculated this economic cost to consist of $38 million for maintaining the necessary management, $20 million for deferred revenues (DOE now accepts the Komanoff estimate, and a savings of $30 million from deferral of anticipated expenditures. Thus he concluded "Total Quantifiable Economic Costs" would be $28 million. 70/

> (C) The Financial Cost Perspective. Mr. Davis stated:
>
> "By analogy to commercial power or industrial plants, the effect of a one year delay in project completion will result in the capitalization of an additional year of interest measured at the time of plant completion." 71/

He then calculated a present worth total financial cost of $218 million.

Thus we have the following DOE estimates for a one-year delay:

November 30, 1981: $120 million

January 18, 1982: (a) $120 million, "clearly conservative"

(b) $175 million

January 28, 1982: (a) $120 million, "clearly conservative"
(b) $161 million
(c) $166 million
(d) $175 million
February 25, 1982: (a) $129 million, "appropriations perspective"
(b) $28 million, "economic perspective"
(c) $218 million, "financial perspective"

I conclude the DOE has finally agreed that as far as the true dollar cost of delay, it is in the region of $30 million - coincidentally, about the cost of the management team. Thus, I need not go into detail as to why I disagree with the earlier DOE estimates. The DOE has dropped them, insofar as we are to address "economics."

This is sufficiently different from the original estimate as to indicate the DOE paid little attention in preparing its original statement, although the series of estimates does not lead me to have confidence in *any* of the estimates. In the case of a utility applicant we would look with strong disfavor on such rapidly shifting submissions.

Thus, I conclude the DOE has failed to make the public interest case and, in the cost area, badly.

I am also concerned that DOE may not understand the appropriate controls that should be applied when assuming the role of a license applicant. The NRC has high standards for license applicants -- which underlie the concept of licensability, which is a CRBR objective. It is because of these standards that showing licensability is an important accomplishment.

Therefore I vote to deny the exemption request.

NOTES

1/ The request is from the Department of Energy, for itself and the Tennessee Valley Authority and the Project Management Corporation. In this opinion this group is collectively referred to as the applicant or DOE.

2/ This position mirrors the Commission's earlier decision on whether NEPA required the NRC to address broader environmental issues previously addressed in the ERDA Program Statement. *Project Management Corporation, et al.* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67 (1976). The Commission was "guided largely by the 'rule of reason' generally applicable to NEPA issues [citation omitted], by the implications of the Energy Reorganization Act and Congressional consideration of the Clinch River project, and by considerations of practicality." *Id* at 79. I find the Commission's reasoning and guidance pursuasive.

3/ *Id* at 92.

4/ *E.g.*, Letter from F. von Hippel to Chairman Palladino (January 13, 1982) (submitted in response to December 24, 1981 NRC invitation for comments on DOE exemption request).

5/ 25 Fed. Reg 8712 (September 9, 1960).

6/ At that time the regulations included 50.12, "Specific Exemptions," which is virtually identical to the current 50.12(a).

7/ 34 Fed. Reg. 2357 (February 19, 1969) (proposed rule to allow exemptions for installation of foundations and below grade walls prior to issuance of construction permit).

8/ 36 Fed. Reg. 22848 (December 1, 1971).

9/ 37 Fed. Reg. 5745 (March 21, 1972).

10/ *Id*.

11/ *Id*. at 5746.

12/ 39 Fed. Reg. 14506 (April 24, 1974).

13/ 39 Fed. Reg. 4582 (February 5, 1974) (proposed rule)

14/ 39 Fed. Reg. at 14507.

15/ 39 Fed. Reg. at 14507-08.

16/ 39 Fed. Reg at 14508.

17/ 39 Fed. Reg. at 14507.

18/ 40 Fed. Reg. 8774 (March 3, 1975).

19/ 41 Fed. Reg. 16835 (April 22, 1976)

20/ 42 Fed. Reg. 22882 (May 5, 1977).

21/ *E.g.*, 39 Fed. Reg. at 14507; *Louisiana Power & Light Company (Waterford Steam Electric Generating Station, Unit 3)*, CLI-73-25, 6 AEC 619, 622 n.3 (1973); *Washington Public Power Supply System* (WPPSS Nuclear Project Nos. 3 and 5 CLI-77-11, 5 NRC 719, 723 (1977).

22/ Letter from Senator Quayle to Chairman Palladino (February 5, 1982).

23/ 37 Fed. Reg. at 5746.

24/ "Final Environmental Statement Related to the Construction and Operation of the Clinch River Breeder Reactor Plant," NUREG-0139 (December 1976).

25/ *Id.* at 9-22.

26/ *Id.* at 9-23.

27/ "Memorandum and Order," CLI-81-35, Attachment A, Question 2 (December 24, 1981).

28/ "Applicants' Answers to Questions Set Forth in Attachment A to the Commission's December 24, 1981 Order" at 5-6 (January 18, 1982) (footnotes omitted).

29/ Unofficial transcript of Commission meeting on February 16, 1982 at 188.

30/ Letter from Representative Fuqua *et al.* to Chairman Palladino (February 11, 1982).

31/ Letter from Senators Domenici and Simpson to Chairman Palladino (February 25, 1982).

32/ Letter from Senator McClure to Chairman Palladino (February 17, 1982).

33/ It should be noted that the Science Advisor to the President, Dr. Keyworth, has also advised us that:

> "From the standpoint that Congress has funded the program and that the President has directed the completion of the CRBR, the requested exemption is consistent with national policy and the public interest." Letter from Dr. Keyworth to Chairman Palladino (February 24, 1982).

34/ Letter from Senator Baker to Chairman Palladino (February 26, 1982).

35/ Letter from Senators Hatfield and Cohen to Chairman Palladino (December 15, 1981).

36/ Letter from Representative Udall to Chairman Palladino (December 8, 1981).

37/ Letter from Senator Tsongas *et al.* to Chairman Palladino (December 9, 1981).

38/ CLI-76-13, 4 NRC at 77.

39/ H.R. Rep. No. 97-208, 97th Cong., 1st Sess. at 827 (1981) (Conference Report for the Omnibus Budget Reconciliation Act of 1981).

40/ Office of Power, Division of Energy Conservation and Rates, Tennessee Valley Authority, "Program Summary" (October, 1981) (TVA/OP/ECR-82/1).

41/ Letter from DOE Secretary Edwards to Chairman Palladino at 2 (November 30, 1981).

42/ Id. at 3.

43/ Id at 3-4.

44/ "Clinch River Breeder Reactor Plant: Site Preparation Activities Report" (November 1981).

45/ Id. at 7-2.

46/ CLI-81-35, Attachment A, Question 9.

47/ Applicants' January 18, 1982 Answers at 40.

48/ Id. at 41 (footnote omitted).

49/ Id. at 42.

50/ Id. at 44.

51/ Id. at 45-46.

52/ Id. at 46.

53/ Funds differ from cash accounts in that assets are placed in funds for specific purposes. The use to which these monies may be put is restricted to the purpose of the fund. Idle fund money cannot be used to pay the rent, invested for revenue, etc. (unless it is an investment fund). Only the monies needed to finance the responsibilities of the fund are assigned to it. The fund does not have title to the money, only the use of it.

54/ Normally, when the government wants to build a costly project, it hires a private contractor to do the work. The contractor pays the cost of the effort and is reimbursed, often at intervals during the process of construction. The contractor must borrow to pay operating expenses. The private contractor, because he must borrow at a real cost (interest) or use his own funds which do have real opportunity costs, may claim the cost of interest as a cost to the project. Therefore, if CRBR were being built by a non-government entity, interest costs would be a cost to the project. Since CRBR is being built largely by DOE with government funds, no opportunity cost should be imputed to the government money.

55/ "Comments of the Natural Resources Defense Council, Inc. and the Sierra Club in Opposition to Applicants' Exemption Request Under 10 CFR §5012" at 32 (January 18, 1982).

56/ Id.

57/ "Statement of Charles Komanoff Presented to the Nuclear Regulatory Commission in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" at 6 (attached to January 18, 1982 NRDC/Sierra Club opposition to DOE request).

58/ I believe that the arguments introduced by Komanoff and taken up in later presentations by DOE on the time value of money are invalid in the context of a government run, fund-supported project such as the CRBR. I summarize the submissions here to document the changing DOE position.

59/ "Applicants' Response to Natural Resources Defense Council, Inc. and Tennessee Attorney General's Comments" at 28 (January 28, 1982).

60/ Id. at 29 n. 32.

61/ Id. at 30.

62/ Id. at 31.

63/ Id. at Chart C (following Chart B).

64/ Id. at 32-33.

65/ "Supplemental Comments of the Natural Resources Defense Council, Inc. and the Sierra Club in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" at 6 (January 28, 1982)(quoting "Supplemental Statement of Charles Komanoff Presented to the Nuclear Regulatory Commission on January 28, 1982 in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" which is attached to the supplemental comments).

66/ Letter from DOE Deputy Secretary Davis to NRC Commissioners (February 25, 1982).

67/ Id. at 2.

68/ Id. at 3 (footnotes omitted).

69/ Id.

70/ Id. at 4.

71/ Id. at 5.

DISSENTING VIEWS OF CHAIRMAN PALLADINO

I firmly believe that the DOE request for an exemption under §50.12 should be granted so that preparation activities can proceed at the CRBR site.

I arrive at this conclusion because I believe that the criteria under §50.12 are satisfied in this case. The information and analysis which we have received on the public record from the participants and the Commission offices demonstrate that:

1. the site preparation activities will not have a significant adverse impact on the environment of the CRBR site;

2. the impacts of site preparation can be redressed and the site returned to a condition suitable for future uses;

3. the site preparation activities do not foreclose future alternatives, including the use of the site for other purposes; and

4. delay in conducting site preparation activities, in view of the readiness of the applicant and the national policy to go forward with the CRBR project, can only result in harm to the public interest.

I do not understand the position of my fellow Commissioners who oppose the DOE request on the basis that granting the exemption would not be in the public interest. It appears to me that in opposing the exemption request they are saying the public interest is better served by denying the petition than by granting it. How is the public interest served in not going forward with the CRBR project where the Congress has approved its construction and operation on an expedited basis, where the applicant is ready, willing and able, and where the activities proposed pose no lasting threat to the environment or to the public health and safety?

If one agrees that there are no environmental or health and safety reasons to deny the exemption, one must ask the question, "What can be the basis for denying it?"

One reason that has been suggested is that the "licensability" of CRBR would not be proved if this exemption were granted. However, an exemption for site clearing and preparation will not remove the requirement of a construction permit before CRBR is built. The granting of this exemption would not foreclose the consideration of any proper question about CRBR in that CP proceeding. I do not understand how "licensability" is at stake in our decision on the exemption unless one aspect of CRBR licensability is to test its ability to withstand unnecessary delay in regulatory approval of site clearing and preparation.

In addressing licensability, Commissioner Ahearne quotes Senator Quayle that an exemption for DOE would be a deviation from NRC licensing procedures and would not serve the

Congressional purpose for CRBR to demonstrate licensability. However, a number of other members of the Senate disagree. For example, Senator McClure has stated that "the Secretary's request [for exemption] is consistent with Congressional intent." Letter to Nunzio J. Palladino, Chairman, NRC, from James A. McClure, Chairman, Committee on Energy and Natural Resources, dated February 17, 1982. The issue is not licensability, but rather whether or not the criteria of 50.12 are satisfied. I believe that they are.

Commissioner Ahearne concludes that Congressional action is not "a directive to waive -- or not waive -- our normal procedures." However, this statement should not end the matter of Congressional intent for our deliberations. I believe our decision on the exemption can and should be consistent with Congressional policy. The Congressional policy for "expeditious" construction of CRBR clearly favors the exemption. The Commission majority does not take issue with my conclusion that denial of the exemption will delay CRBR construction. They simply choose to ignore the delay.

Much attention has been given to the economic costs of delay. I do believe that CRBR will be more costly if we deny the requested exemption. Unfortunately, §50.12(b)(4) of our regulations, which was probably drafted with a commercial generating station in mind, has unduly narrowed the Commission discussions about the public interest criterion.

In this respect, I cannot agree with several of Commissioner Ahearne's statements. For example, he "rests the [CRBR] decision on cost..." Why is no weight to be given to the Congressional policy for expeditious construction of CRBR? Also, he states that "R&D need...is not an NRC issue." However, our regulations make it an issue, and our prior decisions require us to accept DOE's statement as establishing the need for a demonstration facility, including its timing. United States Energy Research and Development Administration et. al., 4 NRC 67, 79, 83-84, 92 (1976).

Commissioner Gilinsky believes that to grant the exemption would adversely impact NRC's licensing and safety responsibilities for power reactors. The information which the staff has given us does not support this view. Rather, we have been told that granting the DOE exemption may require less than one staff year of additional effort. I do not believe that the success of our licensing and safety efforts for power plants depends on one staff year.

In summary, I believe that granting the exemption is in the public interest. The criteria for the exemption are satisfied, and completion and operation of the CRBR has already been determined by Congress to be in the public interest. The Congressional intent for expeditious completion of the project is furthered; the R&D purpose and benefits of the project for our nation will occur sooner; and the hardships and uncertainties created by unnecessary delay of the project are minimized.

Therefore, I dissent and would approve the exemption.

SEPARATE DISSENTING VIEW OF COMMISSIONER ROBERTS

At the outset, I would like to put DOE's request for an exemption in a broader context by looking at the requirements of the National Environmental Policy Act (NEPA) in addition to the requirements of the NRC's regulations which were promulgated to implement NEPA. NEPA requires Federal agencies to determine whether their proposals for action are major and whether they will significantly affect the quality of the human environment. If an agency concludes that its action meets this standard, then NEPA requires that an environmental impact statement be prepared and circulated for comment. NEPA does not require that the conclusions of the environmental impact statement be tested in an adjudicatory hearing.[1]

This contrasts with Section 50.10 of the Commission's regulations from which DOE has requested an exemption. Under Section 50.10, site preparation activities may not commence until (1) a final environmental impact statement has been issued, (2) a hearing has been held and all environmental findings required by NRC's regulations have been made, and (3) a licensing board has found the site suitable from a radiological health and safety standpoint.

Thus, in context, it becomes clear that the NRC's regulations impose more procedural hurdles than the statute (NEPA) they were designed to implement. Specifically, under Section 50.10, an applicant may not commence site preparation until the NRC's final environmental impact statement has been the subject of an adjudicatory hearing. Thus, DOE has requested an exemption not from the requirements of NEPA but from the NRC's requirement that a hearing be conducted prior to site preparation.

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[1] At a public meeting on the exemption request, NRDC's representative agreed with this conclusion by stating, "I must say, I do not think the National Environmental Policy Act requires an adjudicatory hearing," Transcript, December 16, 1981, at 41.

Section 50.12(b) establishes the criteria which must be met in order to permit grant of an exemption from Section 50.10. While I will not reiterate these criteria here, I conclude that DOE has made the showings necessary to satisfy each of the four criteria. With regard to the first three criteria, my conclusions rest on the analyses of environmental impacts described in the Clinch River Final Environmental Statement issued in 1977 and in the OPE Report which analyzed the filings submitted by DOE, NRDC, and others.

With regard to the fourth criteria--public interest--I conclude that it _is_ in the public interest to receive, as soon as possible, the information which will flow from operation of the Clinch River Breeder Reactor. Congress (as the elected representative of the people) has already determined that the liquid metal fast breeder reactor program generally and the Clinch River Breeder Reactor specifically are in the public interest. Given Congress's decision that it is in the public interest that the Clinch River Breeder Reactor be built and operated, the Commission's determination of public interest becomes much narrower. The Commission merely must determine whether _early_ operation of the reactor, and thus early receipt of research and development knowledge, enhances the public interest.[2/] In light of the fact that no unredressable environmental harm or safety harm has been alleged by any participant, I

[2/] I do not read the Commission's decision of August 27, 1976, to foreclose Commission recognition of research and development benefits in its determination of what is in the public interest. Rather, that decision deals solely with the need for the staff to determine the "need for power" from the Clinch River Breeder Reactor in the environmental impact statement. United States Energy Research and Development Administration Project Management Corporation Tennessee Valley Authority (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976).

conclude that, of course, early receipt of research and development information enhances the public interest. Because nuclear reactor technology is very complicated, operating experience is gained slowly. Early operation of the breeder reactor will speed up and increase the informational benefits to be gained.

Given the narrow scope of the Commission's determination, the debate on whether grant of an exemption is in the public interest became rather confused. There was a lot of discussion of the issue of "licensability." That term is, of course, undefined. To me, "licensability" merely means that the Commission is able to license the reactor--in other words, make all the findings required by the Atomic Energy Act (AEA) and NEPA. Grant of an exemption does not affect "licensability." Simply put, there are two routes to pursuing licensing approval--one route involves an environmental hearing prior to site preparation; the other involves a hearing after site preparation has begun. Authority to commence site preparation prior to a hearing before a licensing board is based on the Commission (rather than the Staff and a licensing board) making environmental impact and public interest findings. Thus, regardless of which route is followed, every finding required by the AEA and NEPA will be made. If these findings are affirmative, then the Clinch River Breeder Reactor will be "licensable."

Another issue which dominated the public interest discussion was the question of the impact of grant of the exemption on NRC Staff resources. Preliminarily, it is important to note that when Congress decided that the licensing review of the Clinch River Breeder Reactor would be conducted by the NRC, Congress, in effect, allocated staff resources. The Commission was then under a duty to implement Congress's decision which it did by determining that 15 people would be given the full time responsibility for reviewing DOE's application. To date, only 12 of these slots have been filled; of these 12, only 8 are from the NRC Staff. This allocation of Staff resources would not appear to affect adversely the NRC's ability to work on safety issues. Many commentors appear to regret Congress's decision that any Staff members be assigned to the Clinch River review. Be that as it may, Congress acted.

With regard to the question of whether additional staff reviewers would be required if an exemption were granted, the Staff's best estimate is that no additional people would be needed. The Staff did acknowledge, however, the possibility of an additional 1-2 man years. This impact on Staff resources is certainly not sufficient to justify the conclusion that grant of an exemption is not in the public interest. Additionally, this level of staffing does not support the claim that the Staff's review has been fast-tracked. The present optimistic estimate of when the NRC's licensing process will be complete and a construction permit issued is 1990. An eight-year licensing review would hardly appear to be fast-tracked. In any event, the Commission has not directed the Staff to speed up its review process in any way.

A third issue raised in the public interest discussion was the cost of delay. DOE showed a cost of delay of $28 million. NRDC admitted that that amount could be $20 million. In my mind, a savings to the taxpayers of $20 million is significant and sufficient to justify the conclusion that grant of an exemption is in the public interest. Moreover, I believe that the cost analyses done by both DOE and NRDC were incomplete. The effect of delay on the liquid metal fast breeder reactor program was not discussed. There was no discussion of escalation cost. There was no attempt to determine what effect delay would have in terms of increased regulatory requirements and in terms of the cost of compliance with increased requirements. In other words, I conclude that while DOE made the showing necessary to demonstrate a significant cost of delay, I believe that if the analyses had been more sophisticated, the cost of delay probably would have been larger.

In sum, I conclude that DOE made the showings required by Section 50.12(b) and I would grant the exemption requested.

Question. Can you give us a status report on the new requirements and the need for them?

Answer. In May 1980, the Commission developed a comprehensive and integrated plan of the actions judged necessary to correct or improve the licensing of nuclear facilities based on the experience from the accident at TMI-2 and the official studies and investigations of the accident. There was general agreement among the organizations conducting these studies that improvements in safety were needed in operational safety, siting and design of facilities, and in emergency preparedness.

In May 1981, we published in the Federal Register a proposed change to the Commission's regulations which would incorporate those TMI-related items that should be addressed by future operating license applicants. We are currently finalizing our evaluation of public responses to this notice of proposed rulemaking. A decision on codifying these requirements is expected this year. It is noted that the Commission's regulations have already been amended to incorporate TMI-related requirements for pending construction permit and manufacturing license applicants.

LICENSING PROCESS

Question. You mentioned in your statement that the estimates of potential delay in obtaining operating licenses has been greatly reduced in the past year. What did the Commission do to reduce the potential delays and can you quantify the improvement?

Answer. The reduction in estimated delay accrues from a combination of Commission actions and applicant construction completion date changes. For example, the reduction of 52 plant-months of delay between March and October 1981, consisted of about 70 percent from applicant's estimated construction completion date changes and about 30 percent from NRC actions. The major actions taken by NRC to improve the licensing process were:

(1) The Commission issued a policy statement providing guidance to the licensing boards on how to expedite proceedings.

(2) The Commission modified the immediate effectiveness rule.

(3) The Commission adopted a regulation which precludes consideration of alternative sites under NEPA in operating license proceedings.

(4) The Commission directed licensing boards to attempt where possible to set hearing schedules so that the boards would issue initial decisions within 300 days after the publication of the last staff safety evaluation report that must be issued prior to the commencement of the hearing.

(5) The Commission adopted several changes to the Commission's rules of practice. (These changes authorize licensing boards to make oral rulings on written motions during the course of a prehearing conference or a hearing; preclude parties from filing responses to objections to a prehearing order unless the licensing board so directs; revise the schedule for filing proposed findings of fact and conclusions of law; authorize the licensing boards to require service of documents by express mail; permit summary disposition motions to be filed at any time during the course of a proceeding; and authorize the licensing boards to require responses to motions to compel answers to discovery request be made orally in a conference telephone call rather than in writing.)

(6) The Commission improved the management of the licensing reviews and allocated additional resources to this effort.

Question. What additional assurance can you give us that the clamor from many quarters to speed licensing will not compromise safety?

Answer. The Commission in its policy and planning guidance for 1982 (PPG) made a commitment to public health and safety, while at the same time not unnecessarily delaying the licensing of new plants. The allocation of resources in the NRC fiscal year 1983 budget request is consistent with this policy and planning guidance. Indicative of this commitment are the following excerpts from the PPG:

"SAFE OPERATIONS OF LICENSED PLANTS

"NRC's fundamental task is to make sure that existing plants and those coming on line operate safely. To this end, the highest priority will be given to assuring that operating facilities achieve and maintain adequate levels of protection of public health and safety.

"NEAR-TERM LICENSING PROBLEMS AND RESPONSES

"The NRC intends that its regulatory processes be efficient and cost-effective. Unnecessary regulatory burdens are to be avoided and NRC regulations should allow licensees to select the most cost-effective ways to satisfy NRC safety objectives. At the same time, pressure to issue new licenses will not be allowed to compromise safety."

Commissioner Ahearne notes his views in response to Congressmen Dingell and Ottinger—their letter of December 18, 1981—are unchanged.

The views of Commissioner Ahearne follow:

VIEWS OF COMMISSIONER AHEARNE

To find out whether the priorities given to licensing recovery and to the Clinch River breeder reactor review have hurt the safety review programs would require the type of detailed audit done by OIA or GAO. There are certain symptoms which indicate that efforts have had an adverse impact: the significant decrease in forecast growth of the Office of Safety Technology and the increasing difficulty with keeping resources—both dollars and staff—allocated to the SEP/IREP/NREP programs. I believe the clear sense within NRR has been that licensing recovery and, more recently, CRBR review, are of significantly higher priority than long-term safety technology issues. Realistically, this is not entirely uncoupled from a feeling that many of the long-term safety technology issues are not of great safety significance, that many of the issues are not there for reasons of fundamental safety. A reexamination focusing on critical safety significance is timely and will probably lead to a reduction in the number of issues being examined. Nevertheless, in any organization when it becomes clear that the senior management has shifted priorities, and couples this shift with a reassignment of significant numbers of those personnel identified within the organization as being the most competent, then the rest of that organization receives a strong message.

It has been difficult to retain a focus within the NRC on the SEP/IREP/NREP programs and to maintain adequate resource growth in the area of safety technology. The recent development of the pressurized thermal shock issue illustrates the need for a healthy Office of Safety Technology. The current staff proposal to reorient the degraded core rulemaking, or severe accident rulemaking, toward a program which will rely upon prohabilities of risk assessment for plants, emphasizes the importance of the SEP/IREP/NREP programs.

Consequently, although one cannot point at any specific area in which the CRBR effort or licensing recovery has harmed the near-term safety efforts of the NRC, I suspect that over the long term, this past year's reorientation has adversely impacted these programs. Of greater concern is that unless continued focus is kept on the need for these longer term efforts, then the pressures of CRBR and the near-term licensing reviews could cripple some significant safety programs.

IMPACT OF 1982 AND 1983 FUNDING LEVELS

Question. Has there been or do you foresee any debilitating impact on NRC safety work under the current funding level or that proposed for fiscal year 1983?

Answer. While we recognize that our current funding levels for fiscal year 1982 and our fiscal year 1983 budget request are very tight, we do not believe that these levels jeopardize our safety objectives. In order to accommodate administration and congressional budget actions in a responsible manner, during the fall of 1981, planned work efforts were reevaluated and reprioritized and certain programs were either eliminated or reduced in scope to address only specific high-priority regulatory needs. It should be noted, for example, that the decision to complete testing in the LOFT facility in mid-fiscal-year 1983, consistent with congressional directive, resulted in a reduction of about $25 million from previous fiscal year 1983 budget estimates.

Our prime concern, at this time, with our budget is people. With the current authorization levels for full-time permanent staff-years, we will have to defer certain activities such as some of the priority 2 and 3 TMI action plan items. We will also have to reduce our support offices to questionable level of effectiveness and efficiency in running the agency. In summary, current funding levels should not have any debilitating impact on NRC safety work, but we are concerned about having sufficient personnel to accomplish our job, especially over the next couple of years.

UNEXPENDED BALANCES

Question. The justification material shows prior-year unexpended balances of $210.7 million. Briefly, what is the nature and reason for such large balances? Why have these balances been increasing over the past several years?

Answer. Unexpended balances are the result of issuing contracts (obligations) throughout the year for which the period of performance extends beyond the end of the fiscal year. This is not to say that the contracts cover a period in excess of 12 months, but that the 12 months covered by the contract starts from the day of issuance. This is in conformance with the annual program/budget concept, but since it is impossible to issue all contracts at the start of a fiscal year, the annual performance of contracts (expenditure of obligated funds), by necessity, do not necessarily coincide with the fiscal year.

The increase in unexpended balances over the past several years is a phenomena of the growth in budget authority provided the NRC for program growth and inflation. As more contracts are issued because of program growth, more contracts will cover a period of time that extends beyond the end of the fiscal year.

Question. Provide for the record a detailed breakout of NRC and other than NRC personnel supported by the appropriations request. The tabulation should be provided by major activity, in object classification form, and show the amount and numbers of people supported.

Answer. See following table:

FISCAL YEAR 1983

[Dollars in thousands]

	NRC personnel		Other than NRC personnel	
	Number	Dollars	Number	Dollars
Full-time permanent positions	3,303			
Personnel services		$123,320		
Personnel benefits		$11,590		
Temporary and part-time	94			
Personnel services		$1,580		
Personnel benefits		$150		
Consultants and experts			33	
Personnel services				$1,150
Personnel benefits				$110
Other services				$566
Total	3,397		33	
Personnel services		$124,900		$1,150
Personnel benefits		$11,740		$110
Other services				$586

UNOBLIGATED BALANCES

Question. Provide for the record a breakout of your unobligated balances by years since NRC began operation. The tabulation shown by year, program activity, and include both direct and indirect amounts.

Answer. See following table:

UNOBLIGATED CARRYOVER

[In thousands of dollars]

	Fiscal year—						
	1981	1980	1979	1978	1977	1976	1975
SD	343	1,121	228	530	59	720	277
NRR	1,341	2,750	924	291	299	1,566	1,154
I. & E	1,329	1,929	1,138	1,486	224	896	1,062
NMSS	739	591	465	315	109	755	462
RES	696	798	351	73	1,472	1,574	231
PTS	602	1,402	1,067	321	88	940	414
PDA	1,050	3,405	1,454	1,789	214	1,169	1,015
Total	6,100	11,996	5,627	4,805	2,465	7,620	4,615

Question. What is the projected unobligated balance for fiscal 1983?

Answer. The formulation of a budget assumes that all the funds requested to conduct the programs planned for that fiscal year will indeed be obligated. Therefore, unobligated balances at the end of that budgeted year are presumed to be zero. In fact, however, there generally is an unobligated carryover of varying amounts at the end of each fiscal year. This is caused by various events, such as unforeseen delays in issuing contracts, a reduction from previous cost estimates in the final negotiated contracts, and the deferral or cancellation of planned tasks based upon unpredictable events that have taken place over time.

At this time, we do not project an unobligated balance for fiscal year 1983 and, in fact, it is too early in the year to even predict an unobligated balance for fiscal year 1982.

NUCLEAR DATA LINK PROGRAM

Question. Briefly, what is the nuclear data link (NDL) system that NRC has been developing and why is it needed? How much is included in the 1983 budget for the NDL?

Answer. The nuclear data link is a concept for automating the flow of data from a nuclear powerplant to the NRC during an emergency. The data would consist of a set of operational parameters selected from among those available to plant supervisors. Automatic transmission would provide much more timely, voice relay over telephones. Our experience with the TMI accident surfaced numerous problems and weaknesses with voice communication of plant status which could affect NRC understanding of an event.

No funds are in the fiscal year 1983 budget for the NDL. However, consistent with congressional direction provided during the fiscal year 1982 appropriations process, NRC will be expending prior-year funding during fiscal years 1982 and 1983 to complete the NDL prototype testing and evaluation prior to submission of a report to Congress on the scope, use, and cost of any proposed implementation of an NDL system.

Question. How much has been spent to date on the development effort? What is the estimated cost to complete the development and prototype selection?

Answer. A total of $1,595,000 has been spent to date on the NDL development. These funds were obligated in fiscal year 1980 and fiscal year 1981 for the analysis of NRC operational requirements and the initial definition of an NDL concept. At the conclusion of that effort, the Commission directed that prototypes be used to refine and evaluate the concept in detail before deciding on full implementation of all operating plants. The resultant NDL prototype program has been planned to clarify operational details of the NRC role, relationships with industry and States during emergencies, and the data needed to fulfill the role. Alternative means, other than fully automatic transmission, will also be evaluated for the capability to provide the necessary data. The entire NDL prototype program, planned for completion in fiscal year 1983, will cost no more than $1 million. The Commission hopes to keep actual costs below that figure by soliciting for contractor bids in which cost and schedule will be competitive factors.

Question. What is the estimated system acquisition cost, yearly operation cost, and schedule for selection and installation of the final operational system? Would the selection and award be on a competitive basis?

Answer. These costs and schedules are not yet known but are to be determined in the prototype program. Selection and award would be by competitive bid after Commission evaluation of the results of the prototype program and submission of the report requested by Congress as discussed above.

HTGR RESEARCH

Question. Update the committee on NRC activities related to the licensing of gas-cooled reactors. How much funding is being requested for 1983?

Answer. Current NRC activities related to licensing of gas-cooled reactors are primarily limited to efforts within the Office of Nuclear Regulatory Research. These activities are being carried out in response to previous year congressional requests and provide a minimum maintenance level HTGR safety evaluation capability within the laboratories.

NRR is currently conducting a study concerning the applicability of the TMI action plan (NUREG's 0660 and 0737) to the Fort St. Vrain plant. The results of this study can be adapted, in part, to a licensing review of large HTGR's. This study is scheduled for completion by October 1982.

The RES efforts provide focus on specific key issues of concern for future licensing of large HTGR's. These include detailed evaluation of HTGR graphite and concrete degradation and structural capabilities, further development of reactor plant accident transient evaluation techniques, development of codes, standards, and criteria needed for HTGR plant licensing and regulation, and an initial evaluation of source terms and siting suitability for the proposed lead HTGR plant.

The fiscal year 1983 budget request includes $2.5 million for RES to continue these key HTGR safety research efforts and maintain the safety evaluation capabilities within the cognizant laboratories. No funds are requested for NRR since the earliest forecast for any HTGR licensing activity is late fiscal year 1983.

Question. If an application is received in fiscal year 1983, what would be the schedule for issuing a license for site preparation and then construction.

Answer. Antitrust information must be submitted at least 9 months, but not more than 36 months prior to the date of submittal of any part of the application. The application, if found acceptably complete, can be docketed about 6 weeks after it has been tendered. From the date the environmental report is docketed—including the site suitability information from the preliminary safety analysis report—if the preliminary safety analysis report is to be filed later, the schedule for issuing a limited work authorization for site preparation would be 20 months. From the date the preliminary safety analysis report is docketed, the schedule for issuing a construction permit license would be 29 months.

HEADQUARTERS SPACE CONSOLIDATION

Question. Bring the committee up to date on NRC's efforts to reduce the number of locations where your activities are housed.

Answer. There has been a lack of progress toward the building consolidation program. After months of planning and preparation for the consolidation of major organizational elements of NRC in the Matomic Building, 1717 H Street NW, with actual moves scheduled for March 1982, the General Services Administration reversed its position relative to the assignment of space to this agency and withdrew the building from consideration for NRC consolidation.

In a January 15, 1982, letter, Mr. Betrand G. Berube, Regional Administrator, National Capital Region, GSA, further advised Mr. William J. Dircks, Executive

Director for Operations that in the short term, only two alternatives remained; those being to maintain NRC housing as it is at this time or to lease space in Bethesda to relocate the Commissioners and their staffs to suburban Maryland.

These "solutions," which had earlier been rejected by the Commission, would only add to the problem.

More recently, on March 5, 1982, Mr. Berube wrote a letter to Chairman Nunzio J. Palladino concerning GSA's proposal to request fiscal year 1984 GSA funds to construct a building for NRC in Silver Spring, Md. While it is clear that a single building for the NRC would solve the housing problems, funding for this proposal was previously deleted by OMB. Even if fiscal year 1984 funds were approved, a building would not be delivered for NRC use until the 1990's. Clearly, a delay of 8 or more years before the housing problems are resolved does nothing to deal with short-term space issues.

Our March 31 reply to Mr. Berube's letter requests immediate attention to our critical space problems. Our preferred approach is to consolidate the entire NRC headquarters within one leased facility of approximately 700,000 square feet in the District of Columbia near the other agencies and Congress, with whom we must work daily. As a minimum, NRC requires approximately 350,000 square feet of space in Washington, D.C., to accommodate NRC's primary mission groups—about half the total staff—with other elements remaining in Bethesda, Md.

Question. Have GSA and OMB been helpful and supportive in your space consolidation efforts?

Answer. Notwithstanding the response to the previous question, the General Services Administration and the Office of Management and Budget have been sympathetic to the needs of NRC regarding consolidation, providing whatever assistance was possible within the context of overall demand and space availabilities. GSA, in particular, is inundated under many requests for consolidation and numerous requirements for space adjustments, reflecting constantly changing priorities and the reality of diminishing resources.

Nevertheless, we believe that GSA's latest actions do not show a proper recognition of NRC's desperate space needs. We need help now—not more indefinite plans for the future.

Question. What savings, in terms of dollars and people, could be expected if NRC activities were consolidated. What is the basis of this estimate?

Answer. Numerous staffing and organizational analyses have been performed by NRC in the past few years to determine the benefits that could be expected if NRC activities were consolidated. Potential savings from centralizing NRC headquarters into one location could be identified in the following areas: Redundancy in mail distribution and associated staff and equipment; transportation, delivery, and shuttle bus services between our present dispersed locations would be eliminated; reduction in lost staff time spent traveling between locations; physical security would be simplified and less expensive to maintain; communication costs would be reduced; space use would be more efficient and less costly with the elimination of redundant administrative support areas—that is, conference facilities, libraries, reception and hearing rooms, word processing, et cetera—the quantity of which would be reduced if centralized within a single facility.

Based upon present day costs and the anticipated benefits of centralization, a modest estimate of savings in staff, equipment, and support requirements would be $5 million per annum.

FEDERAL ENERGY REGULATORY COMMISSION

STATEMENT OF C. M. BUTLER III, CHAIRMAN

ACCOMPANIED BY:

WILLIAM G. McDONALD, EXECUTIVE DIRECTOR
STEPHEN MELTON, DEPUTY GENERAL COUNSEL

PREPARED STATEMENT

Chairman HATFIELD. Our next witness is Mr. C. M. Butler, Chairman of the Federal Energy Regulatory Commission.

Chairman Butler, we welcome you to your first appearance before the committee since assuming your new responsibilities. I want to congratulate you on your appointment.

If you will introduce your associates, we have your full statement and will place it in the record. You may proceed to highlight it or summarize as you wish.

[The statement follows:]

STATEMENT OF C. M. BUTLER III

Mr. Chairman and members of the Subcommittee. This is my first appearance before you since I became Chairman of the Federal Energy Regulatory Commission last June. I appreciate the opportunity to be here today to present the Commission's budget request for Fiscal Year 1983. During my first year as Chairman of the FERC, I have assessed the operating requirements of the Commission and have made every effort to assure the exercise of sound fiscal judgement in balancing our resource requirements against the need to eliminate unnecessary burdens on regulated industries in a manner consistent with the public interest.

The budget request is for $92.5 million, the level of resources I feel is necessary for the Commission to process almost 69,000 licensing actions in a timely, effective, and efficient manner. At first glance, the 20 percent increase over the FY 1982 appropriation may appear excessive. However, I should note that the major share of the increase is requested to fund two initiatives that will greatly improve Commission operations. A one-time allowance of $4.7 million is requested to consolidate our operations under one roof in a safer location. An additional $4.8 million is requested to pay for administrative services formerly provided by the Department of Energy under its Common Support Agreement with this Commission. This increase is matched by a corresponding decrease in DOE's administrative budget request. These two initiatives will aid in resolving the problems of less than satisfactory productivity, administrative inefficiency, and high staff turnover, resulting from our present unsafe location, as well as the unsatisfactory level of service provided to the Commission under the Common Support Agreement with the Department of Energy.

It should also be noted that the requested increase in funding for FY 1983 is expected to be substantially offset by the

Commission's proposals to raise filing fees and user charges to regulated industries under the Commission's jurisdiction. We have submitted a legislative proposal to the jurisdictional committees of the House and Senate clarifying our present authority to collect fees and are now developing the necessary rulemakings to implement a fee structure that will recover nearly 45 percent of our budget request. This contrasts with the current level of fees which total about 30 percent of our appropriations. This proposal is consistent with the Administration's position that the costs of regulation should be borne by those who benefit from it, rather than by general taxpayers.

The only program increase requested for FY 1983 is to support rising demands in our hydropower licensing - dam inspection program. An additional $1 million in funding is required to respond to the tremendous surge in filings and license applications that we are receiving in this area. The Commission is now receiving fifty times as many preliminary permit filings as three years ago, six times the number of new capacity filings, and must conduct nearly twice as many dam safety inspections. The $1 million increase will provide additional funds for safety inspections of the dams we license and a small increase in staff to process the large number of filings which has built up due to the renewed interest in hydropower development.

The remainder of the increase in our budget, approximately $5.8 million, is the result of inflationary pressures on basic operating needs such as building rents and communications. An 8 percent increase in funding over FY 1982 is required to maintain the status quo in administrative support and staffing. Approximately $3 million is required in FY 1983 to fund the October 1981 pay raise of 4.8 percent and the January 1982 paycap adjustments for senior level employees.

As Chairman of the Commission, one of my principal concerns is to ensure that productivity is maintained. In the face of declining staff levels resulting from budgetary restrictions, productivity becomes crucial if this Commission is to fulfill its statutory roles and missions. I would like to submit for the record a table which displays the actual workload statistics of the Commission from FY 1978 to 1981 and that anticipated for FY 1982 and 1983. This table shows that our pending workload has been reduced by over 11 percent since FY 1978, while the aggregate workload of the Commission has more than doubled during the same period. In Fiscal Year 1981, we received or initiated 70,866 regulatory actions and we completed 70,773. The table also indicates what we believe to be are reasonable and attainable goals for Fiscal Year 1983 if Congress approves our full budget request.

I would now like to offer a progress report on several management reforms which the Commission has implemented, followed by a more detailed description of the two new initiatives proposed for FY 1983.

The management reforms have a twofold purpose: to reduce our pending workload while maintaining the quality of staff review; and to ensure that the managerial and administrative changes of recent years become institutionalized elements of the regulatory process.

MANAGEMENT REFORMS

Three years ago, the Commission instituted a vigorous review of its reporting requirements in an effort to reduce unnecessary burdens on the regulated industries under Commission jurisdiction. Since that time, thirty-three reporting forms have been eliminated and eight others have been simplified to reduce the amount of information required. This effort has reduced industry's reporting burden by 605,000 hours per year. Thirteen more forms have been identified for possible elimination or reduction amounting to 275,000 hours per year. Overall, the Commission's reporting review program generates an estimated direct cost savings to industry of $13 million each year, with commensurate indirect benefits to consumers. The combined total of actual and proposed changes will reduce industry's reporting burden by more than 55 percent of the level in effect only three years ago.

The Commission has expanded this regulatory review program to include not only our regulatory reporting requirements but also filings, applications, and licensing requirements. We are developing standard formats and simplified requirements to reduce both the applicant's filing burden and the time it takes our staff to process the various filings. Our goal in FY 1982 is to have a 20 percent reduction in this area with additional reductions to be made in FY 1983. Since October 1, 1980, eighteen different application forms have been changed and three have been eliminated, resulting in a savings of 580,000 hours. The total savings accruing to industry as a result of the streamlining of our filing and licensing requirements is approximately $11 million annually.

One of the most successful management reform initiatives undertaken by the Commission has been the delegation of authority from the Commission to the directors of the appropriate FERC program offices to approve many routine actions. These delegations involve routine, noncontroversial matters which the Office Directors can process more rapidly than is possible through the formal decisional procedures of the Commission. This allows the Commissioners to devote more of their attention to major issues. More than 14,000 actions have been decided by Office Directors since these initiatives were first implemented. To further expedite action on our caseload, we have developed plans which will delegate additional decisionmaking authority; these plans are presently under consideration by the Commission.

The Commission is also continuing its effort to reduce the time required to gather and organize information required for the disposition of pending casework. A legal document retrieval system for all FERC regulatory decisions is being developed which will permit faster, more efficient legal research by technical staff and attorneys through quick access to case precedents. In conjunction with this effort, we are streamlining and simplifying our outdated and inefficient method of recordkeeping with integrated micrographic and computer systems to provide immediate document search and retrieval capability. These improvements will free legal and technical staff from much of the frustrating, time-consuming information searches they now face, and allow them to spend more time working directly on matters at hand rather than looking for information.

NEW MANAGEMENT INITIATIVES

As I stated in my opening remarks, the FY 1983 budget request features two new major initiatives which will result in much needed changes in the Commission's operating environment: the centralization of operations at one location and the assumption of administrative support functions previously provided by the Department of Energy.

The most important managerial initiative in the Commission's FY 1983 request is the consolidation of Commission operations at a new location--one that will provide a safe, healthy, and efficient working environment for FERC employees.

The FERC now occupies five separate locations in the Washington area, with the main office located at 825 North Capitol Street. As I reported to this Subcommittee in my December 1981 letter on crime and related incidents at the FERC, the North Capitol Street complex is located in a neighborhood characterized by an extremely high incidence of violent crime. FERC employees and visitors too frequently fall victim to attacks in the building and on the streets by assailants. Threats, physical violence and injury, vandalism, and similar criminal acts are recurring problems.

The presence of two neighborhood liquor stores, one of which is located in the Commission headquarters building, compounds our crime problem. Both stores are heavily patronized during working hours, with many of the customers loitering in the area and becoming abusive to Commission employees. The FERC Credit Union on the third floor of our 825 North Capitol Street building has been robbed at gunpoint several times, resulting in injuries to FERC employees. On one occasion, a robber momentarily held an FERC secretary captive during his escape. Considering the frequency with which these acts of violence are committed using firearms, I share our employees' fears that it is just a matter of time before someone is killed during a holdup or mugging. In this connection, a contract employee was recently robbed and shot just outside the building when leaving after hours.

The Executive Director has on several occasions issued memos warning all employees of the inherent dangers of the area and has urged them to take special care to protect themselves and their belongings. Security has been increased at a significant cost, but the problem is so pervasive that most employees are justifiably afraid for their safety.

I think you would agree that employees are less productive when personal safety is a major concern. The 12 percent turnover rate at the Commission is quite high and can be attributed in large part to our location. The location has also hampered efforts to recruit and hire qualified personnel to replace those who leave. Higher than normal training costs are, of course, also an attendant expense to this problem.

There is an additional justification for moving to a new location. Occupying five scattered locations inevitably causes disruptions and delays in performing our day-to-day responsibilities.

Virtually all major facilities vital to Commission operations are located in the North Capitol Street headquarters. Commission staff located in other buildings must frequently shuttle back and forth in order to attend hearings, conferences, and Commission meetings as well as to visit the library, central files, dockets, the personnel office, and other service centers. The constant traffic of personnel, records, and official files between Commission buildings significantly reduces staff productivity, impairs management effectiveness, and increases the cost of our operations. To make matters worse, the Commission must now acquire a sixth office location to accommodate 120 employees to be transferred back to the Commission upon termination of the Common Support Agreement for whom we presently do not have sufficient space. The obvious solution to this ongoing problem is to consolidate operations in a new, safer location.

The second major initiative proposed in this budget is a $4.8 million request for administrative services previously provided to the Commission under a Common Support Agreement with the Department of Energy. The philosophy behind the Common Support Agreement, which was negotiated in January 1978, was that general administrative support functions such as recruiting, personnel administration, finance, accounting, payroll, automated data processing, and management information systems could be provided by DOE central headquarters personnel without jeopardizing the programmatic independence or objectivity of the Commission.

In the past four years numerous disputes have arisen over the level and quality of support that have been provided by the Department of Energy. This should be no surprise. Since the Commission is independent of the Department's supervision, the Commission has never been high on the Department's own agenda. In fact, I have on a number of occasions had to make requests of the Secretary himself for assistance in routine matters. Parenthetically, the Secretary has always been most cooperative but a system that requires constant interventions at this level is obviously not workable.

In order to allow the Commission to manage its own administrative support services, the Common Support Agreement will be terminated. The $4.8 million addition to the FERC's budget is directly offset by a reduction in the administrative budget of the Department of Energy. Approximately two-thirds of the $4.8 million is to pay for salaries for about 120 support personnel to be transferred from the Department to perform these functions. A small amount is for contractual support to develop the required financial control systems.

Now that I have presented the major new initiatives contained in the budget, I would like to describe our specific program needs.

HYDROPOWER REGULATION

The most critical workload increase experienced by the Commission continues to be in the area of hydropower licensing and dam inspection. Our FY 1983 request is for $23.2 million to support the licensing and inspection of hydroelectric generating plants. This includes a program increase of approximately $1 million. The increased workload in this area is a result of past Congressional initiatives such as the Public Utility Regulatory Policies Act (PURPA), the Energy Security Act, and the Crude Oil Windfall Profit Tax Act, all of which have served to stimulate the development of additional hydroelectric projects.

The impact on our workload has been unprecedented. In Fiscal Year 1978, we received 36 preliminary permit applications. During FY 1979, the number had risen to 76, then soared in FY 1980 to 501, an increase of 550 percent. Last year 1,856 applications were filed, more than three and one half times the FY 1980 total. For the first quarter of FY 1982 another 332 have been filed, and we anticipate this high volume of applications will continue through FY 1983. As a result of this unprecedented influx of applications, our pending workload grew from only 94 at the end of Fiscal Year 1978 to 980 at the end of Fiscal Year 1981.

A substantial number of these preliminary permits will become license applications to develop new hydroelectric generating capacity. Last year 165 new capacity applications in the form of licenses, amendments, and exemptions were filed compared to 63 in Fiscal Year 1980, and 25 in Fiscal Year 1979. We expect this licensing activity to increase in the future--to about 415 this year and about 580 in Fiscal Year 1983. Since processing license applications requires more staff time, additional personnel will be necessary as the current preliminary permits evolve into license applications.

At the end of FY 1981, active license proposals before the Commission totalled approximately 23,500 megawatts, which is equivalent to 25 nuclear power plants. These proposals represent private capital expenditures of $25.4 billion. According to the Bureau of Labor Statistics, these hydropower proposals are estimated to generate 550,000 jobs in direct construction and related off-site industries.

As an added benefit to the taxpayers, the Commission's hydro licensing-dam inspection program is self-sufficient in terms of recovering net operating costs. The Commission recovers between 90 to 95 percent of the cost of administering the hydropower program through the assessment of annual charges to licensees. An additional $5 million is collected as annual charges for use of Federal lands, dams, and Indian lands.

To meet our workload challenges in this area, the Commission has shifted additional staff to this program and has taken steps to expedite case processing. These initiatives included short-form license procedures, simplified filing requirements and procedural changes for processing preliminary permits, changes to general filing requirements and criteria for evaluating applications for permits and licenses, simplified regulations for three types of licenses, generic and case-by-case exemption of small hydroelectric power projects of 5 megawatts or less, and new procedures governing the safety of water power projects and project works. These changes have reduced the regulatory burden on the hydro industry and reduced processing times. To cite an example, processing time for preliminary permits has been reduced from an average of 18 months to 5 months. Similarly, licenses with no formal hearing which previously required 18 to 36 months now require 6 to 17 months. Of course, if a hearing or subsequent litigation is required, the Commission's ability to expedite the process is somewhat limited. Our efforts to reduce further the regulatory burden and processing times are continuing.

A major responsibility in the hydropower licensing - dam inspection program is to ensure the safety of the projects under our jurisdiction. We have authority over more hydroelectric dams than the Corps of Engineers, the Water and Power Resources Service, and the Tennessee Valley Authority combined. Considering the health and safety consequences of a dam failure, the dam safety inspection program is an extremely important part of our hydropower regulation effort. Our dam safety inspection program, which is consistent with the current Federal Guidelines on Dam Safety for Federal agencies, will continue to grow in relation to increases in new capacity.

As each project begins construction or is licensed for operation, the number of inspections also increases. For Fiscal Year 1983 we anticipate conducting 1,920 inspections. This represents an increase of 350 inspections over the current year and 60 percent more than the number we made just last year.

ELECTRIC POWER REGULATION

For our electric power regulatory activities we are requesting $19.6 million for Fiscal Year 1983. Major responsibilities include wholesale interstate electric rates, studies of bulk power supply systems, small-power producers and cogenerators, and interconnections and wheeling applications. We anticipate that electric utilities will continue to file rate increase requests at the same rate experienced during recent years.

Several developments are planned this year in the area of electric power regulation. The Commission's electric rate responsibility was significantly increased by the 1980 Pacific Northwest Electric Power Planning and Conservation Act. The Commission expects to take final action in FY 1982 on the interim rule which amended Part 35 of the Federal Power Act to allow for the consideration of rates filed under this new law. Also in FY 1982 the Commission expects to complete two rulemakings concerned with rate relief: inclusion of construction-work-in-progress costs in the rate base and modifications to the fuel adjustment clause regulations.

In January of this year, I submitted to the Congress a report on the status of coordination and power pooling among electric utilities. The report cites the importance of industry knowledge and initiative in identifying pooling opportunities, the need for a stronger awareness by State regulatory authorities of regional electric power coordination issues, and the possibility that a change in FERC policies could provide more incentives for large systems to share their size advantages with smaller systems. We will continue our dialogue with industry and State regulatory commissions to identify new pooling options and explore ways to minimize regulatory barriers to interstate pooling.

The report also suggested that effective coordination among utilities can reduce the growth in electric rates and ease the financial demands for construction of new generating units. In one recent case, the Commission ordered the interconnection of isolated utilities in Texas with the eastern interconnected system. This order is expected to result in improved electric economy and emergency response capabilities in the south central region. Encouragement of coordination and pooling by the Commission is necessarily a long-term program and should be carried out to the greatest extent possible as a joint effort with the utilities and the State commissions.

OIL PIPELINE REGULATION

To support our oil pipeline regulation activities, we are asking for a total of $7.0 million. Commission jurisdiction in this area is limited to regulating the rates and practices of oil pipeline companies which transport oil in interstate commerce. The funds requested for Fiscal Year 1983 will enable the Commission to complete almost 3,600 filings, reducing the pending workload by 20 percent.

In an order issued in January 1980, the Commission designated the Williams Pipeline Company and the Trans Alaska Pipeline System (TAPS) rate proceedings as "lead cases" for the purpose of determining the ratemaking methodology that is appropriate for this industry under current economic conditions. When a final order is issued in the Williams proceeding, staff will begin to process the approximately 2,000 rate proceedings which have been held in abeyance pending resolution of the case. I expect this backlog to be reduced significantly in the remaining months of FY 1982 and in FY 1983.

As for the TAPS case, during the past fiscal year, all Phase II discovery was completed, and on December 16, 1981, protestants, including our staff's engineering consultants, served their evidence on construction cost overrun issues. The Phase II hearing began on February 24, 1982, and I am optimistic that this hearing will be completed in FY 1983. Perhaps the most encouraging development in this case is that there appears to be some headway in settlement negotiations between the State of Alaska and the pipeline owners.

NATURAL GAS REGULATION

In FY 1983, we are requesting $42.7 million to carry out our natural gas regulation responsibilities. The funds requested will allow for the completion of an estimated 60,000 workload items in FY 1983. Since incoming workload is estimated to be 58,500, the pending workload should decrease by about 16 percent during the period.

Under the Natural Gas Act, the Commission regulates the transportation and sale for resale of natural gas in interstate commerce by issuing certificates of public convenience and necessity and setting rates for such services. Passage of the 1978 Natural Gas Policy Act (NGPA) extended the Commission's jurisdiction to previously exempt intrastate gas and directed the Commission to administer various ceiling prices for certain categories of natural gas production.

In FY 1983 there will be a shift in program emphasis as the 1985 deadline for deregulating certain wellhead gas prices approaches. More of our time must be spent on economic analyses of market conditions if we are to achieve a smooth transition to deregulation within the timetable envisioned by current law. Commission studies will focus on the reemergence of a dual market and the market-ordering problems arising from the regulatory methodology imposed by the NGPA.

CONCLUSION

As I complete my first year as Chairman of the Federal Energy Regulatory Commission, I wish to reiterate two commitments I made upon taking the oath of office: that productivity at the Commission would be emphasized in executing our legislative mandates; and that I would vigorously attempt to relocate the Commission to a working environment which is safe and conducive to encouraging productivity. I am pleased to report that the Commission has continued to improve its productivity by meeting the challenges of an increasing workload during a period of tight budgetary constraints. Our pending workload has been reduced by 11 percent since the Commission was established in 1977. As of February 15, 1982, workload completions have matched workload receipts, resulting in no growth in the overall major caseload of the Commission for FY 1982. Our budget request for FY 1983 will allow us to continue making progress and hopefully accelerate our rate of improvement.

I am also deeply concerned that, given the present work environment and the incidents of violent crime, it is only a matter of time before an employee or visitor is fatally injured. Last year an employee was robbed at gunpoint in an employee parking area at noontime. When accosted, the man immediately handed over his wallet but asked the gunman if he could keep his wedding ring. The reply was "Is it worth your life?" The answer to such a threat is obvious, but the real answer is a relocation to a safe working environment. I cannot emphasize how vital this proposed move is to improving productivity and administrative efficiency at the Commission, and in fact place it as my number one administrative priority.

I trust you will consider the Commission's budget request in light of our accomplishments and our plans for the future. I will be happy to answer any questions that you have concerning our FY 1983 request.

BIOGRAPHICAL SKETCH OF C. M. BUTLER III

C. M. (Mike) Butler III was appointed Chairman of the Federal Energy Regulatory Commission in 1981.

He is an attorney who has been active in the energy field for the past 10 years. Prior to his appointment to the Commission, he served as the administrative assistant to U.S. Senator John Tower of Texas since 1979. In that position, Mr. Butler coordinated the drafting of energy issue papers for the Republican platform committee at the party's national convention in Detroit in 1980. He was also responsible for the Reagan transition team's policy paper on the Alaskan Natural Gas Transportation System.

Born in Midland, Tex., in 1943, Mr. Butler graduated cum laude from the University of Houston in 1969. He received a bachelor of arts degree in economics. He graduated with honors from the University of Texas School of Law in Austin in 1971.

From 1971 to 1973, Mr. Butler served as an attorney for the Houston law firm of Baker and Botts.

From 1973 to 1975, Mr. Butler worked as the chief legislative assistant for Senator Tower. He left the position to serve a year as an attorney for the Dallas law firm of Kendrick, Kendrick & Bradley.

From 1976 to 1979, Mr. Butler was the senior attorney for the American Natural Resources Co. of Detroit, Mich. He returned to Senator Tower's staff in July 1979.

In addition to his work on energy issues, Butler served as a general policy coordinator at the Republican convention platform meetings.

Mr. Butler fills the unexpired term of former FERC Chairman Charles B. Curtis which ends in October 1983. At that time, the President may reappoint Mr. Butler to a full 4-year term on the Commission.

Mr. Butler and his wife, the former Mary Evalyn Burke, are the parents of three children.

BIOGRAPHICAL SKETCH OF WILLIAM G. MCDONALD

October 1977 to the present—Executive Director, Federal Energy Regulatory Commission.

1975-77—Director, Office of Management Information and Program Control, U.S. Nuclear Regulatory Commission.

1972-75—Director, Office of Plans and Schedules, Directorate of Regulation, U.S. Atomic Energy Commission.

1970-72—Office of Management and Budget.

1968-70—National Commission on the Causes and Prevention of Violence.

1942-68—U.S. Air Force colonel (retired).

Education—BA, University of Tulsa; graduate school, Universities of Georgetown and Columbia.

BIOGRAPHICAL SKETCH OF CHARLES A. MOORE

Charles A. Moore was appointed General Counsel of the Federal Energy Regulatory Commission in 1981.

Mr. Moore is a native of Midland, Tex. He majored in political science at the University of Houston, where he also received his doctor of law degree, magna cum laude.

A partner in the Houston law firm of Reynolds, Allen, Cook, Pennill & Hooper, Moore began his career as a trial associate in civil litigation in a variety of areas, including real estate, securities, medical, and legal malpractice. For the past 2 years, Moore has represented interstate, intrastate, and local distribution pipeline companies.

Mr. Moore has won a number of academic and athletic awards at the University of Houston. A former football player for the University of Houston, Moore is a two-time recipient of the Outstanding Athlete of America Award in 1970 and 1971.

Moore's wife, Laura, works as an accountant in Houston.

INTRODUCTION OF ASSOCIATES

Mr. BUTLER. Thank you very much, Mr. Chairman.

On my right is Steve Melton who is Assistant General Counsel at the Commission, and on my left is Bill McDonald who is our Executive Director.

Chairman HATFIELD. You get a little different view of the legislative process than you have had before.

Mr. BUTLER. That is correct.

Chairman HATFIELD. Chairman Butler is a man very familiar with the legislative process, having been a former administrative assistant to Senator John Tower of Texas, I believe, and therefore you feel very much at home here, don't you?

Mr. BUTLER. Well, I do in a way. I am in the same place I used to be.

Chairman HATFIELD. Well, we want you to know that you have a friendly committee here, and we welcome a person like yourself. I think there is great advantage in appointing those who have been career people on the Hill to these agencies such as you represent. I think you can bring a perspective to the agency and, in turn, bring a perspective back to us. I think it makes an excellent kind of bridge between the agencies and the Congress.

Mr. BUTLER. I have found it to be just exactly that, Mr. Chairman.

Chairman HATFIELD. I wish you great success.

Mr. BUTLER. Thank you.

What I would like to do is provide you with a brief summary of the testimony and then offer to answer any questions you may have.

As you noted, this is my first appearance before you since I became Chairman of the Federal Energy Regulatory Commission last year, and I appreciate the opportunity to be here today to present the Commission's budget request for fiscal year 1983.

I would like to submit for the record testimony which describes and supports the Commission's request. I know you have a busy schedule, so, in the interest of time, I will only highlight it.

BUDGET REQUEST

My budget request is for $92.5 million, the level of resources the Commission believes necessary for it to process almost 69,000 docketed items. The request includes two major budget increases that will greatly improve the Commission's operations: $4.7 million to consolidate our operation in a safer location and $4.8 million to pay for administrative services formerly provided by the Department of Energy under its common support agreement with the Commission.

USER CHARGE PROPOSAL

It should be noted that the requested increase in funding is expected to be substantially offset by the Commission's proposal to raise filing fees and user charges to regulated industries under the Commission's jurisdiction. We are in the process of developing the legislative rules to recover 45 to 60 percent of our budget request.

IMPROVEMENTS IN PRODUCTIVITY

As Chairman of the Commission, one of my principal concerns is to insure that productivity is maintained. In that connection, I am happy to report that since fiscal year 1978 the pending workload has been reduced by over 11 percent, while the aggregate workload of the Commission has more than doubled during that same period.

Further improvements in the productivity of the Commission has resulted from several management reforms established since 1977. Three years ago we began a vigorous review of our reporting requirements in an effort to reduce the burden on industry subject to our jurisdiction. In fiscal year 1982 we expect the efforts to include not only reporting but filing applications and licensing requirements. Overall, the Commission's reporting review program generates an estimated direct cost savings to industry of $13 million each year, with commensurate indirect benefits to consumers.

One of the most successful management reform initiatives has been the delegation of authority from the Commission to the directors of appropriate FERC program offices to approve many routine actions. To date, 14,000 actions have been decided by office directors and we have developed plans to delegate additional decisionmaking authority to them.

The Commission is also continuing its efforts to reduce the time spent in gathering and organizing information for disposition of case work. This effort is designed to free staff from the time-consuming information searches it now faces and allow it to spend more time directly on matters at hand.

CONSOLIDATION OF COMMISSION OPERATIONS

As I stated in my opening remarks, the fiscal year 1983 budget request features two new initiatives: centralization of operations and assumption of the administrative support functions previously provided by the Department of Energy. The most important fiscal year 1983 initiative is the consolidation of Commission operations at a new location, one that will provide a safe, healthy, efficient working environment for FERC employees.

As I am sure you are aware, the Commission's main office at 825 North Capitol Street NE, is located in a neighborhood characterized by an extremely high incidence of violent crime. Considering the frequency with which these acts of violence are committed using a firearm, I share our employees' fears that it is just a matter of time before someone is killed during a holdup or mugging. Security has been increased at a significant cost, but the problem is so pervasive that most employees are justifiably afraid for their safety.

In addition, because we are housed in five scattered locations there are disruptions and delays in performing day-to-day responsibilities. The only viable solution to this problem is to consolidate operations in a new, safer location.

TERMINATION OF COMMON SUPPORT AGREEMENT

The second major initiative proposed in this budget is $4.8 million for administrative services previously provided the Commission under a common support agreement with the Department of Energy. In the last 4 years, numerous disputes have arisen over the level and quality of administrative support that has been provided under the agreement. The Department and the Commission have mutually agreed that the best solution to that problem is to allow the Commission to manage its own administrative support services. As a result, the common support agreement will be terminated. As a matter of fact, I should say that a notice of termination will be filed in about a month.

It should be noted also that the $4.8 million request has been directly offset by a reduction in the administrative budget of the Department of Energy.

Now that I have presented the major new initiatives contained in the budget, I would like to describe briefly our specific program needs.

HYDROPOWER LICENSING

The most critical workload increase experienced by the Commission continues to be in the area of hydropower licensing and dam inspection. For fiscal year 1983 we require $23.2 million to support the needs of this program. The increased workload is primarily a result of congressional initiatives that stimulated the development of hydro projects. The impact on the workload has been unprecedented. For example, the number of preliminary permit applications has more than tripled since 1980 and it is anticipated that this high volume will continue at least through fiscal year 1983. It is important to note that a substantial number of these preliminary permits will become license applications to develop hydroelectric generating capacity.

A major element in the hydro licensing—dam inspection—program is to insure the safety of the projects under our jurisdiction. For fiscal year 1983, we anticipate conducting 1,920 inspections, an increase of 350 inspections over 1982, and 60 percent more than the number we made just last year. In order to meet these demands, I have shifted staff to the hydro program and have taken steps to expedite case processing. In addition, the Commission is requesting a million dollar increase for fiscal year 1983. I feel this proposed increase, coupled with the steps taken previously, will allow the Commission to process its workload in a timely manner.

ELECTRIC POWER REGULATORY PROGRAM

For our electric power regulatory activities we are requesting $19.6 million for fiscal year 1983. Major responsibilities include wholesale interstate electric rates, studies of bulk power supply systems, small power producers and cogenerators, and interconnections and wheeling applications. We anticipate electric utilities will continue to file rate increase requests at the same rate experienced during recent years.

OIL PIPELINE REGULATION

To support our oil pipeline regulation activities, we are asking for a total of $7 million. The Commission's jurisdiction in this area is limited to regulating the rates and practices of oil pipeline companies which transport oil in interstate commerce. The funds requested for fiscal year 1983 will enable the Commission to complete almost 3,600 filings, reducing the pending workload by 20 percent.

NATURAL GAS REGULATION

Finally, with respect to our natural gas program, we are requesting $42.7 million for fiscal year 1983. The funds requested will allow for completion of an estimated 60,000 workload items. Since incoming workload is expected to be 58,500 items, the pending workload should decrease by about 16 percent during that period.

SUMMARY REMARKS

To conclude, I wish to reiterate two commitments I made upon taking the oath of office: that productivity would be emphasized and that I would vigorously attempt to relocate the Commission to a safe, healthy work environment. I feel that, considering current budget restrictions, the Commission has held its own during my brief tenure. This statement is supported by the fact the pending caseload has remained level during 1982. I am confident our budget request for 1983 will allow us to continue to make progress and accelerate our rate of improvement.

At the same time, I am deeply concerned about our work environment and its impact on the Commission's operations and staff morale. Simply stated, we could do more to improve productivity in a safer workplace. I trust you will consider the Commission's budget request in light of our accomplishments and plans for the future.

I would be happy to answer any questions you have in connection with our fiscal year 1983 request.

CONSOLIDATION OF COMMISSION OPERATIONS

Chairman HATFIELD. Thank you. It is an excellent summarization of your comprehensive statement.

Chairman Butler, in your statement you indicate that the most important managerial initiative is the move of the Commission to a new location. I want you to know this committee shares your concern for security, safety, the morale of the employees. Would you care to elaborate on your view of the problem and the difficulty that may be attendant to this solution in terms of turnover or recruitment of qualified personnel. What is the impact on personnel and have you quantified what you might indicate as the savings in the outyears, in the future years, because of this initiative?

Mr. BUTLER. I think that there are three separate matters to focus on. First is the turnover rate. It ranges between 12 and 15 percent, and we believe that turnover is largely attributable to the location and the concerns over personal safety that most of our employees have. In that connection, the implication is lower productivity, because we have difficulty maintaining a staff of experienced people. As a consequence, productivity in terms of cost productivity tends to decline as a result of this kind of turnover. At the same time, the training costs for new employees and recruitment costs for new employees increases. Finally, the location tends to limit our selection of employees, and I, in a sort of anecdotal sense, look at it like this. If you were someone who had an opportunity to work in a location that was safe or had an opportunity to work in a location that was unsafe, at the same rate of pay, I think the selection becomes obvious. I think we are finding—and this is somewhat difficult to quantify—we are finding that the quality of people we are able to attract tends perhaps not to be as high as it might otherwise be.

POTENTIAL SAVINGS

In terms of trying to quantify the costs in the outyears and the savings, there are savings in the outyears. I believe we have some staff work that is in process. My Executive Director estimates $15 to $20 million over 3 years.

Chairman HATFIELD. I'm sorry, I didn't hear the figures.

Mr. McDONALD. The staff estimates range from $15 to $20 million over a 3-year period as to the cost of the turnover rate and the cost of training, and as the Chairman mentioned, the inability to get quality people. So our estimate is that the move would return to us $15 million in a 3-year period.

Chairman HATFIELD. Fifteen?

Mr. McDONALD. Yes; and it is hard to quantify, as the Chairman said, Mr. Chairman.

Mr. BUTLER. I think in fairness you have to offest the savings against the cost of the move. In the interest of full and fair disclosure, we have a very, very cheap lease at our present location. So, I would expect our costs to increase, but I would also expect there would be net savings over that period of time.

Chairman HATFIELD. How long do you estimate this will require?

Mr. BUTLER. The actual move? It is awfully hard for me to project, Mr. Chairman, because there is a certain amount of bureaucratic—I suppose that may sound strange——

Chairman HATFIELD. That is Hill nomenclature. You are now part of that bureaucracy.

Mr. BUTLER. I understand. It probably sounds somewhat hypocritical, but there is a certain amount of rigidity, institutional rigidity, we are finding to making this kind of move. I have managed to obtain the acquiescence of the Office of Management and Budget. The General Services Administration continues to be a problem. I would hope we can move in a year or two, but I am sure that is very, very optimistic.

Chairman HATFIELD. Let me turn to the matter of electric power regulation. First of all, I want to commend you for the success in cutting processing of the so-called preliminary permits for hydro from 18 months down to about 5 months, I believe is your record.

RATE ADJUSTMENT REVIEW

Now let me turn to the question of power rate actions, and it appears that the processing time, from our records at least, is increasing. The length of time for completed action varies, according to our information, from 5 to 24 months. In my region of the country, regarding the Bonneville Power Administration, we have had two systemwide rate adjustments which have been pending now, I think, for some 24, 26 months—over 2 years—and another systemwide adjustment is expected to be made this coming fall. What is happening in this area in terms of trying to get these actions expedited?

Mr. BUTLER. Let's focus first of all on the two that have been there the longest, and I will address the latter concern.

As to those that have been there the longest, one actually has been there longer than 24 months. I hate to admit this, but it was filed in 1976. What happened was it was filed with the old Federal Power Commission. The DOE Organization Act came along and it was moved to DOE. It was in DOE for a while and then through a delegation order came back to the new FERC. So we tend to look at our beginning time as sometime roughly around 1979. That is where it gets into that 2-year time frame.

I would like to give you a good reason why it has taken 2 years, but I am not sure I have one. I can tell you this. I expect reports on those two cases, which recently came to my attention, on my desk by the end of April, and I expect to have a decision made forthwith. They have been at the Commission entirely too long, and I accept the responsibility for that.

With respect to the latter item, my recollection is that there were, I believe, two filings that were made in June 1981 under the new Northwest Energy Act, and, as I imagine we are all aware, there has been considerable controversy that has surrounded that statute. The consequence was that the Commission issued an order in January requesting that all interested parties comment on the extent of the Commission's jurisdiction under that act. We did this for due process reasons. I tend to believe that the act is fairly explicit about what our jurisdiction is. Nevertheless, interested parties have been given an opportunity to comment on that question.

The comment period is over. If my recollection is correct, they are being analyzed by the staff now and I would hope we would be able to address that question in the near future. I am aware of the chairman's interest in that case. You do have a commitment from me that they will be moved as quickly as they can be moved.

Chairman HATFIELD. Is this a result of the system or is it a matter of unusual conditions related to each of these cases?

Mr. BUTLER. I think it is a combination of both, Mr. Chairman. I believe with respect to the older cases, you can say fairly it is a matter of systems and, in that connection, the Commission is presently looking at the development of a computer model which, hopefully, would enable us to expedite the processing of rate filings by the Power Marketing Administrations with the same kind of speed that we are now able to process such applications from investor-owned utilities. We have had very good success with a similar type program in connection with the investment utility rate applications.

With respect to the filings of Bonneville, they have been complicated to a certain extent by the passing of the statute and the contentiousness of some of the parties connected with those proceedings. That, I am afraid, is simply a matter of litigation delay. To the extent we can speed that along, we intend to do so.

Chairman HATFIELD. Well, I wish you well in your goals, and I anticipate seeing those actions completed, of course, as quickly as possible.

Mr. BUTLER. I will instruct our congressional staff to keep you posted on the progress.

USER CHARGE PROPOSAL

Chairman HATFIELD. Good.

Now, Mr. Chairman, at the beginning of your testimony you indicate that the requested increase in FERC's budget will be substantially offset by what you call increased user fees. Now, I believe you have also submitted proposed legislation which would clarify your present authority. As a nonlawyer that I am, it seems to me that there is a possible conflict here between the unacted upon legislative proposal to clarify authority, on the one hand, and the starting of a rulemaking or process to increase fees, on the other hand. Would you clarify that for me?

Mr. BUTLER. I will try to, sir.

What we operate under now is the Independent Offices Appropriations Act. That statute is somewhat unclear as to the authority that is conferred upon agencies to assess these user fees. It does not provide us with the authorities to assess annual fees as such, but we can attempt to recover costs for specifically definable benefits if we can first quantify the benefits and define the beneficiaries other than simply the public interest. It is under the aegis of that statute that we have issued our notice of proposed rulemaking

There have been a number of court cases in recent years which define the agency authority under that statute and we have, in the light of those court cases, been looking fairly carefully at whether or not our current fee structure is appropriate. So some of these changes were called for in any event. However, rather than go through the fairly difficult kind of data collection and justifications that we would need to use that kind of a statute, we thought that it might be fairly time saving and perhaps more equitable for us to be able to develop annual charges that we could assess against companies who are in front of the Commission frequently. Those fees have to be offset or separated, I suppose, from actually a third category of fees which is provided for under, largely, the Federal Power Act which allows us to assess headwater benefits, falling water fees, and recovery of administrative costs for hydroelectric permit and licensing applications. That is an area that is in pretty good shape.

I think where we will be directing our efforts in connection with a user fee statute would be, generally, the gas pipeline and electric utility companies.

Chairman HATFIELD. Some of the thrust of your legislation then would be to broaden that base?

Mr. BUTLER. It would broaden the base and——

Chairman HATFIELD. Beyond the hydro where you are collecting most.

Mr. BUTLER. That is right, Mr. Chairman. I think it would also simplify the Commission's ability to define what the fees ought to be.

BASIS OF REVENUE ESTIMATE

Chairman HATFIELD. You estimate that 45 percent, or some $42 million of your budget, will be provided by user fees in fiscal year 1983. What is the basis you are extrapolating these figures from, the present or the anticipated change of your user fee base?

Mr. BUTLER. Let me direct that question to Mr. McDonald. I believe that it is the change, but he can amplify.

Mr. MCDONALD. The Chairman appointed a staff group in October to study the possibilities of putting fees on the 80 products, and if you look at FERC for a minute it is really an 80-product company with gas and electric. So if you put some reasonable rates defined by the task force on the 80 products as they are coming through the door for different kinds of permits, the best estimate that the staff group came up with was somewhere in the neighborhood of $35 million. Using that as a point of departure, the task force report went to the Chairman, and he said, "Let's use this as a guide." A subsequent decision made by the General Counsel was to take a look at these on an individual basis. The first one was on the NGPA which went on the Commission agenda I believe a month ago. The second one went through yesterday. So the intent is to go down each one of the products through the year to see just what can be picked up. The overall estimate is somewhere in the neighborhood of $35 million. It may not fly, but that is the basis of it.

The second consideration is that the legislation would be passed. That would help out.

The third assumption is that the first fees that would be passed would not be taken to court so that the fee structure would be declared moot and then we would be in trouble.

But I gather from your comments that there may be an implication there that the Commission's budget would be tied directly to fees. Our request is that it not be, that the $92 million, or whatever amount you decide to give the Commission, not be tied to the fees and that the fees be sent to the Treasury as they are now.

I believe the Chairman would want to comment on that.

Mr. BUTLER. I think what the chairman was asking is what the total level of this increase would be.

Mr. MCDONALD. It would be our best estimate that we could collect $35 to $40 million and that we presently collect $24 to $25 million.

Chairman HATFIELD. Without the necessity of additional legislation.

Mr. BUTLER. So the total increase would be somewhere on the order of $16 million.

Chairman HATFIELD. Didn't the President's budget include a figure of $60 million and you don't feel this would be collected?

Mr. McDONALD. The President's budget came down two different ways. In the Budget Appendix it came down as $92 million and there weren't any caveats, but in the Budget of the U.S. Government it came down as $32 million with a caveat that we would have to collect $60 million. So there was a disconnect at OMB. The Chairman has met with OMB and we have sent letters there to get this disconnect eliminated. We would like to deal with the $92 million.

Chairman HATFIELD. You say "disconnect." Is that like replacing a fuse? [Laughter.]

Mr. McDONALD. That is right. We want to replace that $32 million with $92 million as it says in the Budget Appendix.

Chairman HATFIELD. Now that you raise the question of OMB, let me tell you of a rumor that is afloat that you have probably heard about, and that OMB is about to reduce your budget request by $60 million. [Laughter.]

Mr. McDONALD. We don't want you to consider that, sir. [Laughter.]

Chairman HATFIELD. Is this the administration's position?

Mr. McDONALD. As far as we know, the Chairman's position is that if they gave us $92 million he would break his neck getting the fee structure in.

Is that correct, Mr. Chairman?

Mr. BUTLER. That is right.

The way that this came about was at the same time we were looking at the prospect of moving, given the current concerns over the size of the budget and so forth, the Commission looked at the possibility of offsets. It came to our attention that here was an opportunity for us to go out and collect fees from the people who are using our services that would substantially offset operating costs. The commitment I made on fees would be that we would use our best efforts to try to put the Commission, as much as possible, on a self-sustaining basis. Now there are some questions about how far we can go in doing that because it is clear there are limitations under the law. My understanding was the last time I talked to anybody at OMB, which has been several months ago now, was that they would provide us with a budget of $92.5 million and we would use our best efforts to collect up to $60 million to offset that $92.5 million, but that the $60 million would go to the Treasury and it would not come to the Commission for the Commission to use in lieu of $60 million of the $92.5 million budget request.

Chairman HATFIELD. You wouldn't be interested in having the Appropriations Committee make the same assumption and only providing $32 million?

Mr. BUTLER. I think I would have an awfully hard time promising the Appropriations Committee or any other committee that we could perform our role under those circumstances.

Chairman HATFIELD. Well, this has been an excellent hearing. I appreciate your very forthright responses and answers to the questions. I am going to sleep well tonight knowing you gentlemen are in command at FERC.

Mr. BUTLER. Thank you very much, Mr. Chairman. It has been a pleasure and privilege to appear before you.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

Chairman HATFIELD. We have additional questions to submit, Chairman Butler, for the record. There are also questions from Senator Eagleton and Senator Sasser as well, that I will make part of the record for your response.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR HATFIELD

COMMON SUPPORT FUNCTIONS

Question: Mr. Chairman, we reviewed your response to the questions asked by the House Subcommittee and we have several follow-up questions concerning your budget request for funds to support the administrative functions performed by DOE in the past and proposed to be performed in FY 83 by FERC. Although it may not be contained in the budget document, have you made a detailed analysis of each support function and the staff years of effort needed? Will you provide it for the record, if you have prepared it.

Answer: As I indicated in my testimony before the House Subcommittee, the budget document does not contain a detailed analysis of each support function but addresses the overall needs of the additional functions we will assume from breaking the Common Support Agreement. At this time, with the exception of the finance, accounting and the personnel areas, we have only preliminarily outlined the staffing requirements and have not made a detailed analysis of the remaining functions.

In the area of finance and accounting, the contractor provided the Commission its recommendations on the staffing level to support those operations on February 1, 1982. Due to the length of this report, I have not provided a copy of this report for the record. However, I will be happy to provide a copy of this report to the Subcommitte for review.

With respect to the other areas, we feel that current operations can provide the base, therefore, we will be able to accomplish the transition to administrative autonomy without the need for the same degree of study as in the financial and accounting area. As for ADP, we have a small in-house ADP staff. The additional ADP staff will be used to develop the required financial and personnel systems as well as expand existing systems.

I would like to submit for the record a preliminary allocation of the 120 positions by function. As we move toward the start of FY 1983 and as we refine the particular needs of each of these various functions, there will be minor modifications made in the staffing allocation.

COMMON SUPPORT POSITIONS

Type of Position	Number of Positions
Accountant/Financial	10
Personnel/EEO/Union	27
Computer	15
Management Analyst	6
Payroll/Travel/Contracting	22
Facilities Operations/Security	22
Secretary/Clerical	18
TOTAL	120*

*114 are full-time permanent and 6 are part-time positions.

FINANCIAL/ACCOUNTING AND ADP POSITIONS

Question: From reviewing your distribution of the 120 positions, it is noted that you have designated 10 positions to accountant/financial and 15 positions to computer. However, in your response to the question on determining administrative needs, you said that a contractor will determine the appropriate number of people and ADP support to operate your financial systems. Is not accountant/financial, computer, and payroll positions a part of the financial system?

Answer: I must point out that the finance and accounting function will include more than just accountant/financial personnel. It also includes people under the category payroll/travel/contracting. However, to clarify the record, the contractor is primarily examining the financial requirements that we must assume including the systems we will need; the numerous financial reports and information that an independent agency must provide to the Treasury Department, OMB, and other agencies; the information we will need to support our proposed fee structure and internal financial management requirements; and recommend the appropriate number of people and ADP support that will be required to support this operation.

The contractor has provided its recommendations on the staffing level required to support the finance and accounting operations of the Commission. The recommendations were included in the Establishment and Conversion Plan provided to the Commission on February 1, 1982. I will consider our contractors staffing recommendations along with other pertinent information before a final distribution of staff is made.

INDEPENDENT OPERATIONS ASSESSMENT

Question: It is our understanding that the contract to assess independent operation of FERC was scheduled to be completed in September 1982. However, subsequent amendments have extended the time beyond the scheduled due date. Please provide a copy of the contract sections and subsequent amendments showing completion date, so that we will know when you will have an analysis to support your estimates.

Answer: The contract to assess the independent operation of FERC in the area of finance and accounting is scheduled to be completed on September 30, 1982. In accordance with the original terms of this contract, the planned completion date has never been changed or modified in any way.

The deliverables under this contract have been divided into three phases, with Phase I and Phase II reports delivered to the Commission on February 1, 1982, and April 1, 1982, respectively. The analysis of the staffing level required to support FERC accounting and financial operations was presented in the Phase I report from the contractor. Due to the length of this report, I have not provided a copy for inclusion in the record. However, I will be happy to forward a copy of this report to the Subcommittee for review.

The General Accounting Office (GAO) has conducted an extensive review of this contract and has copies of all pertinent documents. I will forward GAO's analysis of this contract to the Subcommittee when GAO issues a final report.

ADMINISTRATIVE POSITIONS TRANSFERRED BETWEEN DOE AND FERC

Question: You said that 140 positions were transferred to DOE to handle FERC's administrative support. It is our understanding that 126 positions were transferred to DOE, 113 positions in 1977 and 13 positions in 1978, and in 1979 28 positions were returned to FERC leaving 98 positions at DOE. Please reconcile the 140 positions with the 98 positions.

Answer: At the time the FERC was created and the FPC was dissolved, the FPC had an authorized staffing level of 1,458. Effective October 1, 1977, 117 were transferred to DOE, 128 to the Energy Information Administration (EIA), and 14 went to the Economic Regulatory Administration (ERA); leaving 1,199 positions for the FERC. Seventeen positions were also transferred to the FERC from ICC increasing the total positions for the FERC to 1,216.

Prior to the first official staffing allocation received by FERC from DOE signed November 8, 1977, an additional 13 positions were transferred from FERC to DOE bringing the FERC level down to 1,203. This increases the number transferred to DOE to 130. These are not the 13 positions that you refer to in your question. I think you are referring to the 6 positions transferred to DOE on April 26, 1978, and the 7 positions transferred on May 10, 1978. This makes the total transferred to DOE at 143.

In FY 1979, the print shop operation and 28 staff were transferred back to the FERC. This reduces the net transfer to DOE to 115 positions. To the best of my knowledge, no additional transfers of personnel were made between the FERC and DOE after the print shop transfer. I have submitted a chart showing the reconciliation of positions.

RECONCILIATION OF STAFF TRANSFERRED BETWEEN FERC AND DOE

	Staff Transferred		
	FERC Records	As Per Question	Difference
Initial transfer to DOE effective October 1, 1977	117	113	+ 4
Transfer between October 1, 1977 and November 8, 1977	+ 13 130	-0- 113	+13
Transfer on April 27, 1978	+ 6 136	+ 6 119	
Transfer on May 10, 1978	+ 7 143	+ 7 126	
Transfer print shop staff back to FERC; effective July 1, 1979	- 28 115	- 28 98	+17

POSITIONS FOR COMMON SUPPORT ACTIVITIES

Question: How does FERC's increase in staff from 1,100 to 1,600 positions relate to the 120 positions in your request for administrative support?

Answer: The 1,100 positions represents the number of onboard staff on October 1, 1977, that was transferred from FPC to the FERC. Support staff for these 1,100 positions totalled 143 transferred to DOE and about 30 of 70 computer staff transferred to EIA for a total of 173 or about 16 percent.

Over the past four years as the Commission has increased its' staff from 1,100 to 1,600, we have found it necessary, because of problems encountered with the services provided by DOE under the Common Support Agreement, to staff some support functions on a small scale including MIS, ADP, contracting, and building management. This staff, plus the print shop, is now about 60 people. Adding the 120 for common support functions would make a total of 180 to support our current staff of 1,600 or only 11 percent. To put this in perspective, approximately the same number of people will be supporting about 500 more staff.

FERC PERSONNEL FUNCTION

Question: You said that no additional studies are needed and that the DOE operated personnel office at FERC will probably be transferred intact. Is it true that the personnel office is functioning with 18 employees? If so, why do you need 27 positions in the office of personnel?

Answer: As of March 24, 1982, the DOE personnel office serving the FERC had an on-board strength of 13 people, including clerical positions. To compensate for this gross understaffing situation, I have had to supplement this DOE personnel operation with five additional FERC positions. While the personnel office may be functional within the most liberal interpretation of this word, I do not consider this staffing level sufficient to adequately support FERC personnel service requirements. On March 16, 1982, 134 personnel actions were pending in the personnel office. Over 70 percent of these actions have been pending for more than 30 days. This backup in personnel actions can be attributed solely to the inadequate staffing level assigned by DOE to support the Commission.

A second factor which must be considered in determining the personnel positions required to support FERC operations is that many important personnel functions are not presently performed by the DOE satellite personnel office at the FERC. For example, all SES, Schedule 'C', and Executive level personnel actions are performed by the main personnel office at DOE. In addition, the

DOE headquarters personnel office formulates manpower planning and personnel policies, conducts employee development programs, and prepares all agency personnel reports required by law.

The FERC has obtained informal guidance from the Office of Personnel Management (OPM) in determining the structure and grade level of an independent FERC personnel office. The guidance suggested that the minimum staffing level required to support FERC personnel operations is 28 professional positions. The guidance also suggested that an additonal five clerical positions and four personnel records positions be assigned to the new personnel shop.

In summary, the acute understaffing in the DOE satellite personnel office assigned to support the FERC hampers my ability to attract and maintain sufficient staffing at the FERC and, ultimately, to increase productivity at the Commission.

FUNDING FOR SPACE REQUIREMENTS

Question: Please provide for the record a detailed calculation of the $4.7 million for space requirements with details on the number of people to be housed.

Answer: It must be noted that the total estimate required for the move is $5.74 million. However, since we can realize approximately $1.0 million as a direct cost savings offset, e.g., reduction in guard services, building operations, etc., the net increase is $4.7 million. The $4.7 million for the relocation of the Commission in the FY 1983 Congressional Budget includes a $3.5 million increase for space rental costs and $1.2 million primarily to cover the cost of the actual move and the construction and alteration necessary to establish a layout at the new location that is suitable for the Commission's needs. This includes speciality areas which require special design such as: Commission meeting room; hearing rooms for the Administrative Law Judges; print shop; law library; ADP and computer facilities; and a public document room. The estimate for space was developed in June and July of 1981 based on communications with GSA and other Federal agencies and is based on approximately imately 420,000 square feet to house the Commission's 1,680 headquarters personnel. The remaining 140 Commission personnel are located in field offices.

USER FEES

Question: On page 2 of your prepared statement, you indicate that the requested increase in FERC's budget will be substantially offset by increasing user fees. You have submitted a legislative proposal "clarifying" your present authority, but on the other hand, you are starting a rulemaking to increase fees. Please describe the general thrust of this legislative proposal - will it include increasing fees across the board at FERC, i.e. for areas other than hydropower licensing which currently produces most of the revenues.

Answer: The proposed legislation would allow us to collect an annual charge from natural gas companies, electric utilities and oil pipelines comparable to the charge we collect under existing law from hydropower companies. It would also give us somewhat more flexibility to impose fees for individual applications or other specific requests for authority. The annual charge would be computed by measuring the Commission's cost of regulating each program area, deducting revenues collected through individual fees, and apportioning the remaining cost among regulated companies according to annual sales levels, or other criteria the Commission would adopt. A copy of the legislative proposal is submitted for the record.

LETTER FROM C. M. BUTLER III, CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION

MAR 1 0 1982

Honorable George Bush
President of the Senate
Washington, D.C. 20510

Dear Mr. President:

Enclosed is proposed legislation "to authorize the Federal Energy Regulatory Commission to collect fees and charges for services, benefits, privileges and authorizations granted in administering its regulatory programs, and for other purposes."

The Purpose Of The Legislation

The purpose of the bill is to make clear the Commission's authority to reduce the costs of energy regulation to the taxpayer by recovering a greater share of those costs, in the form of annual charges and user fees, from energy companies that operate under Commission license or authorization. The Commission now has explicit authority to impose annual charges on hydropower companies under section 10(e) of the Federal Power Act (16 U.S.C. §802(e)). The proposed bill would give it comparable authority over natural gas companies, electric utilities and oil pipelines.

Title V of the Independent Offices Appropriations Act of 1952 (IOAA) (31 U.S.C. §483a) states the sense of Congress that regulatory licenses, privileges or other authority should be self-sustaining to the fullest extent possible, and, to that end, empowers agencies to collect fees and charges. However, the Commission's fees and charges under the IOAA have been challenged in the United States Court of Claims. These suits question the Commission's authority to recoup expenses associated with contested hearings, rulemakings, and other essential elements of the regulatory environment in which energy companies hold operating privileges. The proposed bill is designed to supplement the Commission's authority under the IOAA by specifying that the Commission can assess and collect annual charges and user fees to reimburse the United States for regulatory costs not otherwise recovered under existing law. The annual charge for each company would be computed on the basis of the company's share of total energy deliveries or sales in a fiscal year. Annual charges and user fees could also be based on other methods the Commission found fair and equitable. Similar authority to impose annual charges on regulated entities (apart from the Commission's own authority over hydropower companies) is now vested in the Securities and Exchange Commission under section 31 of the Securities Act of 1934 (15 U.S.C. §78ee).

Cost And Budgetary Data

Enactment of this legislation would cause no increase in the Commission's budgetary requirements. It would result in an estimated reimbursement to the United States of approximately an additional $30-40 million of the funds appropriated for this agency in the first year after enactment.

Sincerely,

C. M. Butler III
Chairman

A BILL

To authorize the Federal Energy Regulatory Commission to collect fees and charges for services, benefits, privileges, and authorizations granted in administering its regulatory programs, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Federal Energy Regulatory Commission shall be authorized to collect charges and fees and to retain and use the monies collected for its operating expenses as described in this Act.

SEC. 2(a) Definitions. For purposes of this Act --

(1) "adjusted costs" includes the anticipated direct and indirect costs to the government of administering a program during a fiscal year minus fees anticipated to be collected for services or benefits rendered under the program during that fiscal year under section 2 of this Act or title V of the Independent Offices Appropriations Act of 1952 (31 U.S.C. §483a);

(2) "natural-gas company" has the same meaning as that term has under section 2(6) of the Natural Gas Act (15 U.S.C. §717a(6));

(3) "public utility" has the same meaning as that term has under section 201(e) of the Federal Power Act (16 U.S.C. §824(e)); and

(4) "jurisdictional gas deliveries" means the total volume of natural gas that is sold by a natural-gas company to any person, except another natural-gas company, and excludes the natural gas that is sold to a person who later resells the natural gas in interstate commerce.

(b) Annual Charges to be Assessed.

(1) Each natural-gas company that has an effective certificate of public convenience and necessity under section 7(c) of the Natural Gas Act (15 U.S.C. §717f(c)), shall pay to the United States a reasonable annual charge in an amount fixed by the Commission to reimburse the United States for the adjusted costs of administering the Natural Gas Act (15 U.S.C. §§717 *et seq.*). The annual charge for each natural-gas company shall be computed based on its proportional share of the total juris-

dictional gas deliveries during the previous fiscal year or on a method for apportioning the adjusted costs that the Commission determines to be fair and equitable.

(2) Each public utility shall pay to the United States a reasonable annual charge in an amount fixed by the Commission to reimburse the United States for the adjusted costs of administering parts II and III of the Federal Power Act (16 U.S.C. §§824-25r), except for the regulation of cogeneration and small power production under sections 201 and 210 of that Act (16 U.S.C. §§824 and 824i). The annual charge for each public utility shall be computed based on its proportional share of the kilowatt hours transmitted under interchange power agreements and the gross jurisdictional kilowatt hours sold by all public utilities during the previous fiscal year or on a method for apportioning the adjusted costs that the Commission determines to be fair and equitable.

(3) Each common carrier subject to regulation by the Commission shall pay to the United States a reasonable annual charge in an amount fixed by the Commission to reimburse the United States for the adjusted costs of administering the regulation of oil pipelines. The annual charge for each common carrier shall be computed based on its proportional share of the total jurisdictional volumes transported during the previous fiscal year or on a method for apportioning the adjusted costs that the Commission determines to be fair and equitable.

(c) Fees to be Assessed. In addition to its authority under title V of the Independent Offices Appropriations Act (31 U.S.C. §483a), section 10(e) of the Federal Power Act (16 U.S.C. §803(e)), and section 2(b) of this Act, the Commission may fix and collect fees and charges for applications, requests, grants or approvals of licenses, abandonments, curtailments, exemptions, rate or tariff authorizations, or any other authorization under its jurisdiction to reimburse the United States for the services or benefits rendered by the Commission under its regulatory programs and for costs incurred by the Commission to serve an independent public interest. Fees and charges under this section shall be computed based on methods that the Commission determines by rule to be fair and equitable.

(d) Waiver. The Commission may, by rule or order, waive all or part of an annual charge or fee assessed under this Act.

SEC. 3. When so specified in appropriations acts, any monies collected by the Commission may be retained and used for operating expenses when these monies are not earmarked for specific programs of other departments and agencies, notwithstanding the requirement in other law that monies be paid into the Treasury as miscellaneous receipts.

SEC. 4. This Act takes effect on October 1, 1982.

We believe that annual charges would more equitably distribute the cost of Commission regulation than would a series of individual application fees. However, the proposed legislation includes a provision for specific fees in those cases where the Commission deems them appropriate. Any revenues from those special fees would be used to offset the amounts collected under the annual charge program.

Question: Do you need additional legislative authority to increase fees and, in your view, what are the prospects for passage of this legislation?

Answer: Additional legislation is necessary before we can extend a schedule of annual charges to natural gas companies, electric utilities and oil pipelines. The Commission's existing authority for collecting fees and charges is based on the Independent Offices Appropriation Act (IOAA) and PART I, Section 10 of the Federal Power Act. Section 10 provides extensive authority for fees and charges in the hydropower licensing area but does not apply to the Commission's other regulatory programs. The IOAA has been the subject of a number of court decisions that some parties read as severely limiting the authority of agencies to recover regulatory costs through fees. If such a narrow reading were ultimately applied to the Commission's existing fees regulations, even the present level of fee collections would be in doubt. Therefore, new legislation would greatly assist the Commission in establishing increased fee collections. I hope that your committee can assist in the passage of our proposed bill.

Question: Your FY 83 budget request states that 45% or some $42 million will be provided in user fees in FY 83. What is the basis for this amount?

Answer: The task force, which I appointed in September 1981, established recommended fees for specific regulatory activities performed by the FERC. These recommended fees were based on the average annual Commission staff salary, including benefits, and an appropriate amount of related administrative expenses for a staff year. In order to project actual fee recovery for any specific year, the recommended fee for an activity is multiplied by the number of items expected to be received in that fiscal year.

The task force's recommendations are presently being incorporated into a series of proposed rules by our Office of General Counsel. Due to the lengthy rulemaking process, it is difficult to predict how soon all Final Rules will be in effect; in addition, because of the necessity to consider public comment, it is impossible to accurately predict the actual fee which may be established for each category. If the task force recommendations were adopted without alteration, fees collected from all areas of the Commission could possibly reach $57.7 million in FY 1983. However, all Final Rules would have to be in place by October 1, 1982, in order to recover the maximum amount. It has been estimated on the basis of the rulemakings tentatively scheduled to be in place by the beginning of FY 1983 that it may be possible to collect up to 45% of the FY 1983 budget request.

Question: Why do you believe the $60 million as mentioned in the President's budget will not be collected in FY 83?

Answer: The rationale supporting my concern that the FERC will be unable to collect $60 million in fees during FY 1983 is twofold. First, the authority and methodology which government agencies have used to collect fees has been the subject of lengthy legal debate and extensive litigation. This is the primary reason the Commission has submitted a legislative proposal to the jurisdictional committees of the House and Senate clarifying our present authority to collect fees. Congressional approval of this legislative proposal would strengthen our authority to assess fees, but still would not guarantee a dependable revenue flow to sustain Commission operations.

Secondly, assuming that a legislative package strengthening the Commission's authority to collect fees is enacted, we estimate that it would take six to nine months to issue a final rule implementing the new legislation. The FERC rulemaking process is constrained by the requirements of the Administrative Procedures Act which contains complex and time-consuming procedures beyond the direct control of this Commission. In addition to the time consumed in rulemakings, new fee rules are likely to be contested in the courts, with the possibility of a court's staying collections pending judicial review.

While I believe there is a reasonable chance the Commission can implement a revised fee structure to collect approximately $35 to $40 million in FY 1983, it is far from certain that fee receipts will total $60 million. The ultimate level of collections would depend in part upon how quickly the new legislation is enacted and implemented.

FY 1983 BUDGET AMENDMENT

Question: There is a rumor afoot that OMB will propose a FY 83 budget amendment to reduce your budget request by $60 million -- the amount that will be collected in fees. If this is the Administration's position, why shouldn't the Appropriations Committee make the same assumption and only provide $32 million for FERC in FY 83? Or do you disagree with the Administration's position?

Answer: I have reviewed OMB's proposed amendment to the FERC's appropriation language and would like to provide for the record my concerns over this proposal as outlined in my March 25, 1982, letter to Mr. David Stockman, Director, Office of Management and Budget.

LETTER FROM C. M. BUTLER III, CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION

MAR 25 1982

Mr. David A. Stockman
Director
Office of Management and Budget
Old Executive Office Building
Washington, D.C. 20503

Dear Mr. Stockman:

I have reviewed OMB's proposed amendment (Enclosure A) to the Federal Energy Regulatory Commission's appropriation language as originally presented in the Budget of the United States Government, Fiscal Year 1983. I am deeply concerned that tying the Commission's appropriation to this projected level of fee receipts -- which, in reality, cannot be guaranteed -- could jeopardize the regulatory operations of the Commission.

Last August, at meetings with members of your staff, I assured them that I would do everything possible to support the President's initiative to increase user fees for Federal services. Specifically, I stated that the Commission would collect approximately $23 million in fees during FY 1982 and I agreed to examine thoroughly the Commission's present fee structure. At that time, I felt that the FERC could nearly double its annual collection of fees and charges in future years.

To date, the Commission has moved rapidly in implementing a new and comprehensive fee structure. My first action was to establish a task force to analyze the present fee structure and recommend changes. At the same time, I called for the immediate development of a time distribution reporting system which will enable the Commission to track all the direct costs associated with each work product. The task force report was submitted to me last December and I am in the process of implementing its recommendations. The report calls for a two-pronged approach which will be acted on concurrently:

- Draft legislation that would allow the Commission to recover budget expenditures for the Natural Gas Program under the Natural Gas Act and Natural Gas Policy Act, plus expenditures to implement parts 2 and 3 of the Federal Power Act and the Public Utility Regulatory Policies Act;
- Initiate rulemakings to revise the Commission's entire fee program under existing statutory authority.

With respect to rulemakings to increase user fees, a Notice of Proposed Rulemaking covering the NGPA area was approved in principle by the Commission on February 12, 1982 (Enclosure B). Similar action was taken yesterday as to functions of the Office of the Chief Accountant (Enclosure C). While the Commission is progressing toward meeting its goal of full cost recovery, I must point out that in order to implement any change in the FERC fee structure of the magnitude we discussed, the Commission will have to issue individual rulemakings with provision for public notice and comment on most of its 80 "product categories" (i.e., licenses, applications, etc.). As you know, the FERC rulemaking process is constrained by the requirements of the Administrative Procedures Act which contains complex and time consuming procedures beyond the direct control of this Commission. In addition to the time consumed in rulemakings, new fee rules are likely to be contested in the courts. As the limits of the Commission's authority under existing law to collect fees is uncertain; so is the outcome of the rulemakings.

The Commission's draft legislative proposal on fees and annual charges was submitted to the Congress on March 10, 1982 (Enclosure D). However, initial Congressional reaction to this legislative proposal has not been favorable. The House Committee on Energy and Commerce report to the Budget Committee contained the following recommendation:

> "The proposal to allow the FERC to retain fees is likely to be rejected; revenues from agency fees should be deposited, as they are today, in the U.S. Treasury. Otherwise, agency funding would be subjected to enormous uncertainty."

Obviously, the specific objection can be easily dealt with by amendment. However, assuming the proposed legislation is enacted we estimate it would take six to nine months to issue a final rule implementing the new legislation. Assuming the legislation is enacted October 1, 1982, we would expect the rulemaking to be completed and issued sometime between March and June, 1983.

While I continue to believe that there is a reasonable chance the Commission can implement a revised fee structure to collect approximately $35 to $40 million in FY 1983, it is far from certain that fee receipts will total $60 million. Since I cannot reasonably expect to collect the entire $60 million in FY 1983, a reduction in our budget corresponding to the size of fee collections might well jeopardize our regulatory operations.

I am also concerned that the Commission may not have its entire budget available at the beginning of the fiscal year. The appropriation language which OMB is now considering would give the FERC only $32.5 million on October 1, 1982, with the remainder becoming available as fees are collected. Aside from the possibility that we will not have enough funds for existing programs, the fundamental timing problem inherent in this budget proposal is that a high percentage of the Commission's costs are fixed while the stream of receipts from fees is variable. A major percentage of the Commission's annual operating budget is nondiscretionary. Approximately 88 percent of the FY 1983 budget request of $92.5 million is for employee payroll requirements and other fixed expenses, such as office space leases. In the area of fixed overhead expenses, the funds must be obligated early in each fiscal year. Should the Commission become dependent on fees as its primary source of revenues, I do not believe it could operate. There would be a real danger of the Commission having to shut down periodically until sufficient revenues from fees are received. The result would predictably be chaos in the electrical, pipeline, and producing industries. I strongly recommend you consider the potential, negative impact of this proposal on the Nation's energy delivery systems.

Even if the Commission were able to balance expenditures with current receipts from fees, the impact of litigation in the fees area could disrupt Commission operations. The authority and methodology which government agencies have used to collect fees have been the subject of lengthy legal debate and extensive litigation. Should the fees program become "derailed" due to unforeseen circumstances, including the possibility of a court's staying collections pending judicial review, it would be exceedingly difficult for the Commission to meet its financial obligations.

I would like to reiterate my commitment that the Commission will continue to implement a full cost recovery system as expeditiously as possible. However, I do feel urgently compelled to express my concern over the proposed budget amendment which could have a devastating impact on Commission operations in FY 1983.

I will be happy to meet with you to discuss this issue.

Sincerely,

C. M. Butler III
Chairman

USER FEES RULEMAKINGS

Question: How long will it take for the rulemakings to be in place and for the receipts to be sent to the Treasury?

Answer: Last year the Commission initiated a program to revise its entire fee program under existing statutory authority. It is well underway and the Commission has already considered proposed rules involving fees for activities under the Natural Gas Policy Act of 1978, for certain general activities and for responding to Freedom of Information Act requests. We expect to have this program in place and in effect by the end of September 1982.

If the proposed legislation is enacted, we estimate it would take six to nine months to issue a final rule implementing the new legislation. Assuming the legislation is enacted October 1, 1982, we would expect the rulemaking to be completed and issued sometime between March and June, 1983. In the interim, we would expect to continue collection of fees under the program now being proposed, and, when appropriate, would assess charges for cost incurred by the Commission for the entire year.

Assuming that the fees program does not become "derailed" due to unforeseen circumstances, including the possibility of a court's staying collections pending judicial review, fee receipts will be sent to the U.S. Treasury after the Commission issues final rules for each program according to the above schedule.

COLLECTION OF FEES AND ANNUAL CHARGES

Question: How much money was collected in FY 1980 and FY 1981 as the result of user fees? Please provide a breakout by major budget class.

Answer: The following table represents the amount of fees collected through regulatory activities at the Commission in FY 1980 and FY 1981. The reason for the large increase in total collections from FY 1980 to FY 1981, and in particular the annual charges for the Hydropower Licensing Program, resulted from collecting the FY 1979 annual charges for Hydropower Licensing in FY 1981 instead of FY 1980.

FEES AND ANNUAL CHARGES COLLECTED

PROGRAM	FY 1980	FY 1981
NATURAL GAS	$ 4,232,000	$ 4,270,000
HYDROPOWER LICENSING	3,966,000	16,315,000
OIL PIPELINE	136,000	135,000
ELECTRIC POWER	2,111,000	3,130,000
TOTAL	$10,445,000	$23,850,000

DELAY IN BILLING FOR 1980 ANNUAL CHARGES

Question: Why were your Calendar Year 1980 billings for major and minor hydro projects not sent out until December 1981, almost six months later than usual. Please elaborate on DOE's accounting systems inability to record and report on FERC support costs for hydro activities.

Answer: The reason that the 1980 billings for annual charges were so late lies entirely with DOE. In January, 1981, the Commission's budget staff had informally requested the required DOE financial information that was needed to complete our computation of the costs for annual charges. No information was provided so we finally wrote to DOE on May 12, 1981 requesting the specific information that we needed to finish our computations. This was about one month before I was sworn in as Chairman of the Commission last June. Again, DOE did not respond to our request for the information. As soon as this matter came to my attention, I personally sent a letter to the Assistant Secretary for Management and Administration, again requesting the information on September 21, 1981. After reviewing and analyzing the DOE information, furnished on October 9, 1981, the final costs for the 1980 annual charges were forwarded on October 27, 1981 to our Office of Electric Power Regulation for processing. On November 25, 1981, they sent the draft bills to the DOE Accounting Office for final processing and billing; the billings were finally sent out by DOE on December 15, 1981.

COMPUTERIZED ANNUAL CHARGE BILLING SYSTEM

Question: We understand you have some problems in developing and implementing a computerized annual charge billing system for major and minor hydro projects. Please provide a chronology of these problems and your schedule for resolution.

Answer: In April 1981, a request was submitted to the Energy Information Administration to develop a computerized annual charge system. The project was begun in May 1981. A Functional Requirements Document, which describes the approach and calculations involved, was delivered to FERC in July 1981. The computer system was developed, tested and delivered to FERC in January 1982. During the past two months, our Office of Electric Power Regulation has conducted tests of the computer system to determine if the bills and associated reports are being produced correctly. At this time, some problems have been identified, as is expected whenever any manual process is first converted to a computerized process. Commission staff has subsequently been directed to review the computer system, to identify discrepancies, and to recommend corrective action. In order not to delay the 1981 billings, 1981 bills will be produced manually. The computer system will then be modified and tested in time to produce the 1982 bills. Our goal is to use this computer system, when operational, as a model for other annual charges systems that may be necessary in the future.

Question: What steps have you taken to establish a system, i.e., accounting, billings and collections to implement a Commissionwide annual charge system? Who will operate and provide computer support, i.e., DOE, FERC, or EIA? Please provide a schedule of how you plan to phase in this annual charge system, including established timeframes or milestones, projected staffing needs, grade-levels, computer system support; also, include an estimate of your expected costs for each milestone with a cumulative total, e.g., FY 82, FY 83, and FY 84 costs; also, include costs for the time distribution reporting system and any modifications to the Commission's Management Information System.

Answer: At present, the Commission collects annual charges only for hydroelectric projects. This process is being computerized and will be fully operational for the 1982 billings. The computer support is provided by EIA. Accounting support is provided by the Office of the Controller, DOE, although the computerized system will also monitor collections, based on data provided by DOE. Should other annual charges be implemented in the future, additional computer systems will be developed and will utilize the experience gained in the computerization of the hydro annual charges.

Fees are presently collected when applications are filed. The payments are forwarded to the Office of the Controller, DOE, who provides accounting support. When the common support agreement between FERC and DOE is severed, the Commission will implement its own accounting system. This system will include a subsystem to account for fees collected and annual charges billed and received. The computer support for an internal accounting system will be provided by FERC. Within FERC's accounting section, 2-5 staff members will be assigned to collections, depending on the magnitude of the annual charges and fees.

The schedule and costs for any additional annual charges systems cannot be developed until such systems are identified, which, of course, requires Congressional legislation and subsequent Commission rulemakings. Based on experience gained with the hydroelectric annual charges, it is expected that another system would cost approximately $100,000 to develop. No modifications to the Commission's Management Information System or the Time Distribution Reporting System will be required to implement additional annual charges or fees. The procedures are already in place to report workhours by fee category. Additional categories can be established in the same method as they are established now when management reporting requirements change.

PENALTY FOR NONPAYMENT OF FEES

Question: What penalties and/or enforcement actions is the Commission considering to impose if fees or charges are not received? For example, some agencies will not process an application and may suspend or revoke a license if an applicant or a licensee has failed to pay a prescribed fee.

Answer: The Commission has maintained the policy that it will not process an application if the fees are not paid in full. Commission certificates are issued conditioned upon the payment of all applicable fees. Therefore, under the Commission's present regulations, any certificate for which fees are in arrears has no legal "force and effect." The Commission's regulations specifies a 5 percent penalty for annual charges which are not paid within 60 days with an additional penalty of 3 percent for each full month of delinquency.

USER FEE AWARENESS EFFORT

Question: What type of public education efforts do you plan in order to discuss the merits of an expanded user fee collection program? What are the costs vs. benefits of such a program?

Answer: Any fee arrangement will require the cooperation of the public in order to be effective, and I believe that public education is essential for successfully implementing a user fee collection program. Should the Commission adopt a complex schedule of filing fees, informational material would be distributed to assist applicants in determining the fee applicable to each application. In addition, the ongoing rulemaking proceedings provide an additional educational function. As regulated entities participate in the rulemakings and submit comments, we will develop a greater understanding of the policy and administrative aspects of implementing a user fee program.

I view a user fee collection program as providing a significant number of cost and benefits. The cost includes the administrative burden placed upon both applicants and the Commission staff to process and account for the fees. In addition, delay may result in those instances where waivers for fees must be resolved before an application is processed.

As to benefits, I believe that a fee program would promote social equity by shifting the cost of Commission regulation from the taxpayers onto the specific groups which receive direct financial benefits from the Commission's services.

It should be noted that an annual charge has an advantage over application fees by being easier to administer and places less of a paperwork burden on the industry and the Commission.

INCREASED WORKLOAD

Question: As your statement indicates the only program increase in FY 83 is in the hydropower program - about $1 million over FY 82 levels. Please give the Committee a brief sketch of the tremendous increase in filings over the last three years.

Answer: During the last three years, the number of hydroelectric filings have increased dramatically. This was due primarily to the numerous incentive programs established by Congress and the Department of Energy. Initially, these increases were in the form of preliminary permits which were issued for a period of one to three years. After the preliminary permit expires, the applicant may file for a license, causing further increases in our pending workload. This increase in filings by major hydropower workload categories can be seen in the following tables which I would like to provide for the record.

HYDROELECTRIC FILINGS RECEIVED

	ACTUAL			ESTIMATED	
Category	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983
New Capacity	25	73	91	165	328
Preliminary Permits	76	501	1,856	1,500	1,200
Other License Applications	240	284	497	548	582
Totals	341	858	2,444	2,213	2,110

PENDING HYDROELECTRIC FILINGS

	ACTUAL			ESTIMATED	
Category	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983
New Capacity	35	70	102	188	354
Preliminary Permits	94	404	980	980	680
Other License Applications	495	314	315	415	480
Totals	624	788	1,397	1,583	1,514

DAM SAFETY INSPECTIONS

Question: You state that FERC must conduct nearly twice as many dam safety inspections in FY 83. What are the reasons for this large increase in workload?

Answer: One of the major objectives of the hydropower licensing program is to ensure the safety of licensed dams in operation as well as those under construction. Because of recent Congressional initiatives to encourage the development of small hydropower, we are now processing and licensing more applications than ever before. Since 1979, hydro license and preliminary permit receipts have increased over 518 percent, and our pending workload for the same period has increased 143 percent. As more hydro dam sites are constructed and become operational, more safety inspections will have to be made. Thus, our FY 1983 projections include 1,920 dam inspections, which is 70 percent higher than in FY 1979. This unprecedented growth in the inspections program requires the Commission to maintain a quality inspections program verifying the safety of license dams while keeping abreast with the influx of applications. We currently conduct yearly inspections of operating dams and monthly inspections for dams under construction. This schedule can be accelerated if the dam site is considered high risk or safety questions arise during the construction phase.

HYDROPOWER LICENSING

Question: As I recall, last year you proposed legislation to exempt smaller hydro projects of 15 megawatts or less from licensing requirements (presently 5 mw exemption) and this raise in the exemption threshold was expected to save $1 million dollars in FY 82. What is the status of that proposal and what would be the projected savings in FY 83?

Answer: The proposal in last years budget which referred to a potential saving of $1 million in FY 82 concerned the elimination of FERC jurisdiction for projects up to 15 MW. The references in that document are to the "licensing threshold." Your question, however, refers to an "exemption threshold" of 15 MW as compared to the present 5 MW threshold.

Savings associated with increasing the present 5 MW exemption limit to 15 MW could change some 50 expected license applications in FY 83 within this range to exemption applications at the option of the applicant. While this would reduce staff manpower requirements to some extent, there would not be significant savings because processing an exemption application still requires some staff evaluation and decisionmaking. On the other hand, eliminating FERC jurisdiction over projects with a capacity less than 15 MW would potentially reduce the FY 83 workload by some 1,300 applications including preliminary permits, minor licenses, major licenses and exemptions.

The 15 MW exemption proposal surfaced briefly in the House of Representatives last summer as part of the Broyhill Republican version of the energy title of the Omnibus Budget Reconciliation Act. The Dingell Democratic version, which was ultimately adopted by the House, did not include the 15 MW exemption language. Legislation raising the exemption threshold to 15 MW has never been separately introduced in the House.

On June 2, 1981, Senator James McClure, Chairman of the Senate Committee on Energy & Natural Resources, introduced a bill at the Administration's request which creates a 15 MW waiver similar to Section 10(i) of the Federal Power Act. Although the Senate Energy Subcommittees on Energy Regulation and Water and Power have held joint hearings on hydro development and licensing, specific legislative hearings have not been scheduled.

RESOURCES FOR THE HYDROPOWER LICENSING PROGRAM

Question: For the record, please provide the Committee with the level of funding and personnel for each of the programs within the hydro licensing program in both FY 82 and FY 83.

Answer: The Commission does not identify specific programs within the Hydropower Licensing Program; rather, the Commission maintains workload categories under the Hydropower Licensing Program. For FY 1982 the total funding and fulltime equivalent (FTE) staffyears related to this program is $16,062,000 and 380 FTE's respectively. For FY 1983 funding of $23,218,000 and 453 FTE's are requested. It should be noted that the 453 FTE's requested in the Congressional Budget include 46 FTE's for Common Support functions. These 46 FTE's reflect the prorated share to the Hydropower Licensing Program. If the Common Support FTE's are excluded, the actual request is for 407 FTE's, an increase of 27. This increase is for the purpose of completing the increased workload associated with dam safety inspections and new capacity filings. As I indicated in my testimony, dam safety insepections are expected to increase in FY 1983 by 350 or 22 percent over FY 1982. In addition, the FY 1983 request of $23,218,000 includes the prorated share of costs associated with the move to a new location and the common support salaries and expenses. When these two items are excluded, the effective request is for $20,838,000 or an increase of $4,776,000 over FY 1982.

QUESTIONS SUBMITTED BY SENATOR JAMES R. SASSER

ACCELERATED DEREGULATION

Question: Earlier this month I was pleased that President Reagan announced he would not support accelerating the deregulation of natural gas. American families are already suffering under the hardship of gas prices which have increased seven hundred percent in the last nine years. So when the President made his annoucement, I commended his position.

But other recent statements both by the President and FERC lead me to wonder if the Administration is trying to achieve accelerated decontrol through backdoor administrative actions rather than submit to open and free debate of the proposal.

Just two weeks after the White House indicated its intention not to seek legislation to accelerate decontrol, the President was in Oklahoma proclaiming "natural gas decontrol will be good for the Nation."

At the same time, Mr. Chairman, we find that FERC is proposing new rules and you are considering recommending other changes which will permit accelerated deregulation despite the earlier statements by the White House that deregulation would not be accelerated.

So, my first question is this. What is the policy of this Administration. Does the Administration support accelerated deregulation or not?

Answer: As you know, the Commission is an independent regulatory Commission which functions as a collegial body. Accordingly, neither I, as Chairman, nor the Commission itself can speak for the President or other members of his Administration.

I can, however, state as I have before other Senate committees that, personally, I believe that phased total deregulation of gas supplies would be best suited to resolving the market ordering problems which appear to be evolving in today's natural gas markets. In this connection, the debate continues on whether there will be deregulation because the NGPA prescribes deregulation for 1985. However, the kind of deregulation -- partial -- has perverse consequences that total deregulation appears to avoid. These unintended consequences of the NGPA which have become collectively known as the market ordering problem, are three.

First, and foremost, is the apparent failure of the NGPA to preserve for consumers the benefits of continued controls on some gas beyond 1984. Both the Energy Information Administration and the Office of Policy, Planning and Evaluation in DOE have projected that the price to be paid by the residential consumer in 1985 will be essentially the same under the present law as it would be under total decontrol. Instead, the NGPA will in effect tend to transfer the economic benefit of partial controls to sellers of decontrolled gas by way of a subsidy.

Second, the NGPA has recreated a new dual market distinction between interstate and intrastate purchasers in which some interstate pipelines appear to have a distinct bidding advantage over other interstate and most intrastate pipelines. Renewed shortages and curtailment of industrial users may be one result.

Third, absent an unforseeable collapse in world oil prices, the NGPA is likely to produce sudden increases in the price of natural gas to consumers in 1985. This increase may be particularly difficult to accept for those consumers who have just spent as much as $1,000 to convert their homes from fuel oil to "inexpensive" natural gas.

It is against this backdrop that I have based my personal recommendation to the Congress to draft a phased total deregulation proposal which may avoid these consequences.

ADMINISTRATIVE DEREGULATION

Question: I would like to discuss some of the specific proposals which are being considered by FERC. First, in December FERC proposed a rule which would allow producers to charge up to 150 percent of the existing statutory ceiling set by the Natural Gas Policy Act of 1978 for intermediate or near-deep gas, which is produced from depths of 10,000 - 15,000 feet. It is my understanding that this proposal alone will add from $6 billion to $18 billion to American energy costs over the next three years. The average consumer, under the near-deep well proposal, would have to pay from $90 to $140 over the next two years alone in direct and indirect cost increases.

There are several things wrong with your proposal, aside from the added costs to the consumer. First, it must be acknowledge that drilling activity has increased substantially in the last few years. This alone raises questions about the need to provide any new incentives for near-deep wells. Second, FERC indicates that costs to producers are greater for these near-deep wells than for the more shallow wells, but I have seen no justification in FERC notices which indicates costs of near-deep drilling have increased to the degree which would prompt a 150 percent windfall for producers. The Congress, when it passed the Natural Gas Policy Act in 1978, found no need for the kind of incentives FERC is now proposing for intermediate gas. Third and most important, the Natural Gas Policy Act does not permit FERC to provide such a windfall for these near-deep wells. The Act does allow adjustments for "extraordinary risks and costs" but that does not appear to be the case here. So under what authority does FERC base this proposal?

Answer: Your question concerning the Commission's notice of proposed rulemaking for intermediate deep gas (10,000 - 15,000 feet) raises three issues: The need for an incentive price; justification of the price proposed (150% of the Section 103 price): and the authority on which the FERC based its proposal.

First with respect to authority, Section 107(b) of the NGPA provides "Commission Authority to Prescribe Higher Incentive Prices...applicable to any first sale of any high-cost natural gas, which exceeds the otherwise applicable maximum lawful price to the extent that such special price is necessary to provide reasonable incentives for the production of such high cost gas."

The Commission in its proposed rulemaking indicated that it believes gas produced from depths between 10,000 to 15,000 feet is high cost gas and that there is a need for a special incentive price. The Commission's position is based on evidence that there is relatively little development of intermediate deep reservoirs, that costs and risks of production appear to increase as a function of depth and, therefore, that the costs and risks might be significant enough to initiate a proposal to determinate whether such gas should be subject to an incentive price ceiling. Commission staff experience tended to support these preliminary conclusions.

Your third question requests an explanation of the grounds for setting the proposal price at 150 percent of the section 103 price. The Commission's proposed price was tentative and was presented more to encourage comments than as a reflection of any conclusion. The discussion in the notice compared the proposed ceiling with the ceiling established for tight formation gas, noting that some tight formation gas is produced from intermediate depths and that such gas involves greater costs and risks. In proposing the price, the Commission emphasized that it was proceeding with caution because of its limited data. Therefore, the price proposed is merely a focal point for comments and should be considered as a conclusion already reached by the Commission.

INTERPRETATION OF JUST AND REASONABLE PRICE FOR NATURAL GAS

Question: Chairman Butler, it has been reported that you are considering proposing increasing the price of "old" gas -- that which was discovered before 1977 -- to the highest allowable price for any gas. This would increase consumer costs $10 billion next year alone. For my constituents in Memphis, where gas supplies are 79 percent "old" gas -- this would be an average increase of $225 a year to consumers in Memphis whose bills now average $510. In Nashville, which receives 71 percent "old" gas, consumer bills would go up to $600 a year -- a $150 increase.

Now, the Natural Gas Policy Act allows FERC to increase old gas prices only if those increases are "just and reasonable". FERC has previously interpreted "just and reasonable" to be based on historical production costs and a reasonable rate of return. This interpretation has been upheld by the courts.

The proposal you are said to be considering, Chairman Butler, would apparently substantially liberalize the interpretation "just and reasonable". I understand you have temporarily withheld making the proposal and I hope you will reconsider it in its entirety because of the massive cost increase asosciated with it.

How would your proposal change the traditional interpretation of "just and reasonable" and are you still planning to formally make the proposals at a later date?

Answer: The question of Commission action to increase rates of certain categories of older gas under the NGPA is one which has been surrounded by a great deal of inaccurate information and speculation.

Let me begin by stating that I share your concern with the impact which increasing gas costs have on all consumers. It is for this very reason that I believe that some remedial action must be taken to prevent, or at least mitigate, the disorder presently evolving in our natural gas markets as a consequence of the scheme of partial decontrol mandated by the NGPA. The price estimates made by the Department of Energy and by the Energy Information Administration both project that consumer costs of natural gas will increase dramatically when partial decontrol takes effect after December 31, 1984. Most analysts believe that the average price of gas in the field markets will rise to market clearing levels. Indeed, many analysts, focusing on oil-tied pricing provisions in some contracts coupled with "most-favored-nation" clauses in many others, are projecting that the average price of gas in the field markets will be forced substantially above market clearing levels for a period of time. Such a "price spike" could mean substantial load loss by many distributors as their industrial customers switched to cheaper alternatives such as No. 6 residual fuel oil. Of course, such load loss, if it persisted over a period of months, would again result in increased prices to residential customers as a higher percentage of the fixed costs of transporting and distributing the gas were imposed on the remaining on-system customers.

Within this analytic framework, I turn to your specific questions. First, a proposed Notice of Inquiry has been scheduled on the Commission's agenda for the meeting of April 7, 1982. This Notice will solicit public comments and analysis concerning all aspects of the market ordering problem and request suggestions from the public as to what regulatory steps could be taken to mitigate the adverse economic impacts presently foreseen.

The proposed Notice would not institute a rulemaking proceeding, but would serve to focus public comment and debate on such major topics as the extent and severity of market disorder likely to occur over the next three years if no action is taken, the likely consequences of various alternative measures which the Commission might consider proposing, and the Commission's legal authority under the NGPA and the Natural Gas Act to address the various problems.

In connection with the latter point, I might add that preliminary legal research has suggested that the enactment of the scheme of partial decontrol under the NGPA may compel a reexamination of the "just and reasonable" standard and may support some refinement of that standard in light of current economic realities. The proposed Notice will specifically call for members of the public to address this question in detail.

Senator Sasser, I hope that this response allays any concern you may have that the Commission might somehow take precipitious action on a matter of such seriousness. I would like to specifically invite you to respond to the Notice of Inquiry and provide the Commission with the benefit of your thoughts and concerns regarding the market ordering problem and potential remedies, especially as regards gas users in the State of Tennessee.

COMMISSION RELOCATION

Question: Frankly, Chairman Butler, I am very skeptical of your proposal to spend $5.7 million to move the Commission to plusher headquarters. We are in a tight budget year. This appears to me an area where this committee can cut. Why should we allow this expenditure when the budget is $100 billion in deficit?

Answer: Of the $5.7 million requested to relocate our facilities, $1 million will be saved in direct costs as a result of combining all our facilities into one location. The remaining $4.7 million will be the net costs needed to move and settle into the new building. Our primary objective for requesting a move at this time is to ensure the personal safety of our employees as well as the general public who visit our site daily for public hearings, meetings, filing of documents, requesting information, etc. The number of incidents involving thefts, muggings, armed robberies, and grand larceny has continued to increase. The safety and security problems associated with our present headquarters facility were outlined in my December 15, 1981 letter to Chairman Hatfield which I would like to provide for the record. These criminal acts have contributed to the overall low employee morale which is reflected in the Commission's high personnel turnover rate. Despite numerous management initiatives which include crime prevention lectures, improved security procedures, increased security manpower, and shuttle service, the rate of incidence and resultant turnover continue to affect adversely the programmatic mission of the FERC.

I do not believe that the costs associated with this proposed move to assure the personal safety of Commission employees and the general public is unreasonable.

(The letter referred to follows:)

LETTER FROM C. M. BUTLER III, CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION

DEC 15 1981

Honorable Mark O. Hatfield
Chairman, Energy and Water
Development Subcommittee
Senate Appropriations Committee
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In reference to the conference report language on the FY 1982 Energy and Water Development Appropriations bill, I too am concerned for the safety and well-being of FERC personnel, and therefore welcome the opportunity to report on the progress and problems in improving safety and security at the FERC.

The area around the Commission's headquarters complex at 825 - 941 North Capitol Street is an extremely unsafe neighborhood. The proximity of this complex to Union Station provides the vagrants, alcoholics, and drug addicts who live in the streets and alleys surrounding the train station with a steady stream of innocent victims, FERC employees and visitors conducting business at the Commission. Threats, muggings, vandalism, and other acts of violence are recurring problems both inside as well as outside the complex. There are two liquor stores within one block of each other, one of which is located in the complex itself. Both stores are heavily patronized all during work hours, with many of the patrons loitering in the area, some becoming quite abusive and physically menacing to FERC employees. The credit union on the third floor of 825 N. Capitol Street has been robbed at gun-point several times resulting in minor injuries to FERC employees. Theft of government and personal property in the complex has reached epidemic proportions. A crime analysis performed by the U.S. Federal Protection Services indicates that over $60,000 worth of government and personal property was reported stolen from the 825 - 941 North Capitol Street location in FY 1980 and FY 1981 (Enclosure A).

Needless to say, employees are less productive when personal security is a major concern. Nor can the Commission expect to retain employees who seek employment elsewhere because they want a safer place to work. The turnover rate at the Commission for FY 1981 was 12.8 percent (Enclosure B). Accordingly, this environment inhibits both the effort to retain personnel as well as recruitment efforts to hire new staff.

Even more discomforting is the continued harrassment of Commission employees through frequent bomb threats. During the past 9 months, 19 bomb threats have been received at the Commission's 825 North Capitol building forcing the evacuation of employees (Enclosure C). Again, employee productivity drops to zero during these frequent evacuations.

As Chairman of the Commission, I have taken the following steps to counter this situation:

- o All FERC employees were required to attend a series of crime prevention lectures presented by the Federal Protection Service. These lectures are intended to help FERC employees protect themselves and government property from acts of violence and theft (Enclosure D).

- Building security personnel have been increased and security procedures have been revamped to deter acts of violence and theft (Enclosure E).

- Several meetings have been held with DOE Security personnel, the FBI, the Metropolitan Police, and the Federal Protection Service to discuss methods whereby the numerous bomb threats can be counteracted and stopped. Procedures advising employees on what to do if a bomb threat is received as well as reporting any information on the identity of the individual(s) responsible for these threats have been distributed to all employees (Enclosure F).

- The FERC has contracted for a rush-hour shuttle service to transport FERC employees to and from the Union Station public transportation terminal (Metrorail, bus, and commuter trains). By eliminating this two-block walk for employees, I hope to reduce the incidences of physical violence and verbal abuse involving FERC employees.

In summary, my concern over the safety and security of FERC employees is shared by all managers and employees at the Commission. This concern is based not only on protecting individuals against physical harm and abuse, but also on our desire to successfully execute the FERC's statutory missions. Security practices, procedures, and personnel have been bolstered to the limit at a significant cost to the Commission, but the crime problem at this location is so pervasive that most employees still fear for their safety. I plan to provide you with a monthly report which summarizes the progress this Commission has made in eliminating or minimizing this very costly problem which can be attributed directly to one factor -- the current location of the Commission. Given the constraint of location, I assure you that every feasible action will be implemented promptly to ensure the safety and well-being of FERC personnel.

Sincerely,

C. M. Butler III
Chairman

FY 1983 TRAVEL COSTS

Question: Travel costs for FERC are budgeted to increase 21 percent during Fiscal Year 1983 to $2.5 million. Why are your travel costs increasing?

Answer: While it may appear that the Commission is receiving a significant increase in travel funding in FY 1983, in actuality the increase is really quite small. This increase will be used primarily to provide funding to carry out the increased travel in the dam safety inspection activity. As you know, the workload in the Hydropower Licensing Program has increased significantly which has brought about a major increase in the number of inspections the Commission must perform. The number of inspections to be completed in FY 1983 is 1,920, an increase of 22 percent over the FY 1982 level of 1,570. These funds are vital to perform the inspections necessary to ensure the safety of the dams under the Commission's jurisdiction. The remainder of the increase is necessary to provide travel to accomplish audits of regulated companies.

Question: You are spending $1,400 for every employee, including secretaries. Can't you make some reductions there?

Answer: About 95 percent of the Commission's travel funds are expended primarily by four program offices. The largest amount, about $1,000,000 is for the Office of the Chief Accountant to pay for about 60 field auditors in full-time travel status. These auditors must visit the companies to review the books and records to verify that the oil pipeline carriers and systems, natural gas pipeline companies and electric utilities are conforming to the Uniform System of Accounts. Additionally, $620,000 is budgeted for the Office of Pipeline and Producer Regulation to carry out mandated Natural Gas Act and Natural Gas Policy Act requirements, $560,000 has been budgeted for the Office of Electric Power Regulation primarily to perform dam safety inspections on licensed hydroelectric projects as well as those under construction and $125,000 for the Office of the General Counsel to perform investigative and enforcement functions. The remaining 5 percent, or $123,000, is utilized by the eight remaining offices.

COSTS FOR OTHER SERVICES

Question: I note that under the object class analysis you are budgeting $11,707,000 for "Other Services" in Fiscal Year 1983. In Fiscal Year 1982 you are projecting an expenditure of only $7,575,000 for "Other Services." This is a $4 million increase. What will this $11 million be spent for and why the $4 million increase? Please elaborate for the record.

Answer: The $11.7 million requested for Other Services includes $8.5 million for programmatic contractual activities and $3.2 million for administrative support. The $4 million increase from FY 1982 to FY 1983 is required to provide $1.3 million for the relocation of the Commission; $0.6 million for additional ADP support needed because of termination of the Common Support Agreement with DOE; and about $2 million more for programmatic contracts. The $2 million increase for contracts is due to the fact that we have had to reprogram more than $ 2.2 million from our FY 1982 contract funds to salaries to cover the FY 1982 pay raise last October and the senior staff pay cap increase which took effect in January, 1982. We had to absorb both of the pay increases and as a result of the reprogramming, some FY 1982 contractual activities had to be delayed until FY 1983. I would like to furnish for the record a breakdown of the $11.7 million.

BUDGET FOR OTHER SERVICES

Contracts:

Natural gas regulation	$ 310,000	
Hydropower licensing regulation	1,010,000	
Oil pipeline regulation	500,000	
Electric power regulation	775,000	
Program support	5,905,000	
Total contracts		$ 8,500,000

Administrative support activities:

Equipment maintenance	$ 72,000	
Building operations	2,196,000	
Guard services	285,000	
Graphics services	81,000	
Health services	75,000	
Training	275,000	
Copier support	100,000	
Other	123,000	
Total administrative support		$ 3,207,000
TOTAL OTHER SERVICES		$11,707,000

QUESTION SUBMITTED BY SENATOR THOMAS F. EAGLETON

MARKET ORDERING PROBLEM UNDER NGPA

Question: In reply to a question during a hearing on March 3, 1982, of the House Subcommittee on Energy and Water Development Appropriations, Federal Energy Regulatory Commission, Chairman Butler stated that the Commission has, to date, incurred a cost of $25,000 to "address the alternatives to the market ordering problem that has resulted under the NGPA." The Chairman said that he anticipates that the Commission will spend an additional $300,000 to $400,000 for further study of the subject.

Will the Commission please provide the Subcommittee with a detailed analysis showing how the $25,000 has been spent.

Please also provide a statement which outlines in detail how the Commission plans to spend the additional $300,000 to $400,000. This statement should include a description of all subjects that the Commission plans to study with these funds and an estimate of the amount projected to be spent on the study of each subject.

Answer: In April 1982, the Commission will consider the issuance of a Notice of Inquiry (NOI) to gather data and solicit comments on determining just and reasonable rates for certain first sales of natural gas under the Natural Gas Act. If an NOI is issued, the Commission will prepare a technical report covering the relevant information that is available at this time. In addition, copies of the computer model which FERC has set up and tested on the Energy Information Administration computer will be made available for public review.

The cost estimate of $25,000 expended to date in support of this initiative was based on approximately one-half staffyear of effort. The one-half staffyear represents the effort expended by employees in the General Counsel's office and the Office of Regulatory Analysis to draft an NOI for Commission consideration and to prepare and run test data through two computer models.

The estimate of $300,000 to $400,000 which the Commission plans to spend in support of this NOI and associated work as described above was based on the following assumptions: (a) the Commission would conduct six regional hearings as part of this proceeding at a total cost of $75,000. (b) Since I anticipate that the NOI will generate significant public interest in the form of written comments for Commission consideration, the equivalent of 7 staffyears of effort will be required from the following Commission offices to review and analyze the comments and to prepare the technical report: two in the Office of Regulatory Analysis, two in the Office of the General Counsel, two in the Office of Pipeline and Producer Regulation and one for all other Commission offices. (c) Using the FERC's current salaries, benefits, and overhead factors, the total cost estimate for supporting the NOI and related efforts of the Commission is $383,000.

At this time, I do not anticipate that contractual assistance will be required to support this Commission proceeding.

SUBCOMMITTEE RECESS

Chairman HATFIELD. Our next subcommittee hearing will be tomorrow in room 1318 of the Dirksen Building, at 2 p,m., to begin outside witnesses for various water projects around the country. Tomorrow we will have witnesses from the State of California, which is south of the State of Oregon.

[Whereupon, at 3:50 p.m. Wednesday, March 24, the subcommittee was recessed to reconvene at 2 p.m. Thursday, March 25.]

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